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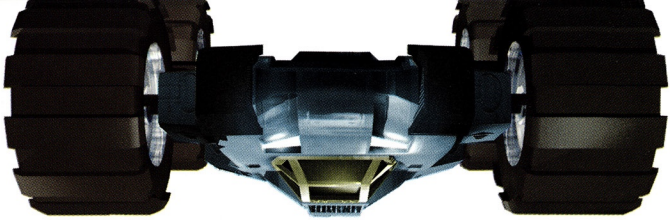
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THE BIG BLUE

Ask anyone who loves Sega's blue mascot and they'll tell you that there hasn't been a real Sonic game since *Sonic and Knuckles*. Watching a once-great videogame character star in a collection of substandard Saturn sequels and spin-offs has been a dispiriting experience — somewhat akin to watching a box-office star slip into the made-for-TV-movie morass. As Sonic makes his return in Japan, we rate the game — and the comeback — on page 22.

As *Sonic Adventure* launches, Sega's veteran game designer and producer, Yu Suzuki is selling a dream of his own. *Shenmue*, the highly anticipated *Virtua Fighter RPG* project, is now very much a reality. As the curtain rose for the first public showing of the game in Japan, **Next Generation** was there to bring you the scoop (page 21).

Back on home turf, the Quake III hype machine is gathering speed. We follow up our in-depth report on Id's latest project in **NG 50** with a face-to-face interview with John Carmack. The PC world wouldn't be the same without him, and by the sound of it, the future of 3D graphics, online gaming, and Ferrari's sales forecasts wouldn't be either. You can catch him on page 70.

And for those of you who've seen the TV ads for Acclaim's *South Park* game — the answer to the question "How can an ass this big fit into a cart this small?" can be found on page 84. And by the way — you killed Kenny. You bastards.

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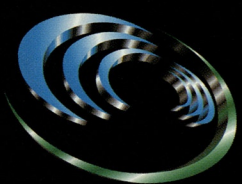


It's a dark cave. Inside your head, you hear your heart pounding.
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Next Generation shares editorial (and editors) with the U.K.-based magazine **EDGE.** Unsolicited manuscripts cannot be returned or acknowledged. Letters may be edited for space, clarity, or so we look cool. Goodbye Zender the Great, you will be missed. Anyone got a managing editor they can spare? We could be in trouble. And last but certainly not least, welcome to the planet young Riley (7lb, 3oz, and only a couple of weeks early — not bad) I know Erik and Jen are glad to see you.

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Thanks for joining us. Next Generation also has passion for changing the text that the marketing people give us if it gets in the way of the section that we usually put funny text in. Heck, sometimes it's all that keeps us going. See above this box for more funny little text.

NEXT GENERATION



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INSIDE THE RACING MIND OF JOHN CARMACK

He all but invented the first-person shooter, and he might be the best computer game programmer on the face of the Earth. Currently working seven days a week on *Quake III: Arena* (and wishing there were more days in the week than just seven), Id's John Carmack doesn't have time to look over his shoulder at everyone running to keep up with him technologically. How does it feel to be at the top? Does he have any spare time at all? **Next Generation** talks shop with the hardest-working man in the game business



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GAME PHYSICS

Games simulate reality, right? Well, not just yet — but they're getting closer. **Next Generation** examines how different games in different genres handle real-world physics



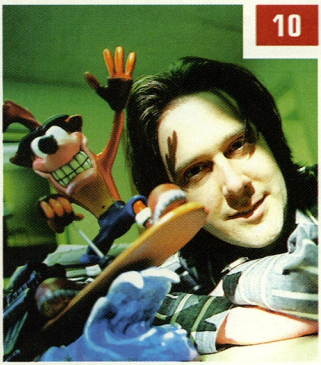
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DREAMCAST

Read the full review of *Sonic Adventure;* the latest on Yu Suzuki's *Virtua Fighter* RPG, *Shenmue;* and more. Plus, check out the story of Sega hardware from Genesis to Dreamcast starting on page 78



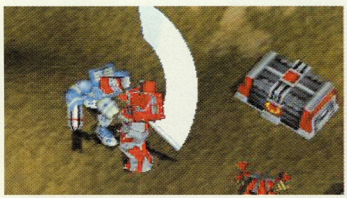


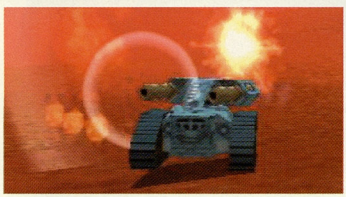


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Why do you think we call this magazine **"Next" Generation**? Take a look at the latest information on the games you'll be playing sometime around the next millenium











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FINALS: 16 games reviewed

Few things in life give us more pleasure than a great game — and few things annoy us more than a crappy one. See what our crack reviewers think is hot (and what's not) this month

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Apple plans to return to games in a major way, and the first commercial **PlayStation emulator** arrives — on a Mac, no less

INTELLIGENCE

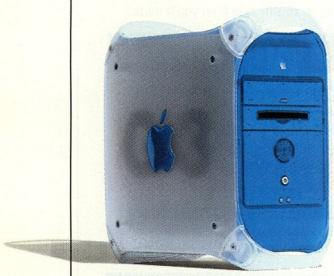
Game industry news and analysis

APPLE TACKLES GAME MARKET

"This time we're serious" declares Jobs, Apple

Gamers have long scoffed at the Macintosh, and that's been fine with Apple, which has never seemed to view gaming as a high priority. With the exception of a few dedicated companies such as MacSoft, Bungie, and Graphic Simulations — who often seemed to succeed despite Apple — the company has earned a reputation as indifferent, if not downright hostile, to games and game developers.

"We want to be the best game platform in the world," Jobs said in a public recommitment to games at Macworld Expo



Apple plans to turn around that reputation. "We want to be the best gaming platform in the world," interim CEO Steve Jobs announced in a public recommitment to games during his keynote address.

The backbone of Apple's strategy is building computers that will win over both consumers and developers. The company's new flagship G3s boast speeds of up to 400MHz and includes an ATI Rage 128 graphics accelerator on the motherboard along with 16MB of graphics memory. Although the clock speed is slower than the 450Mhz high-end



images courtesy of **Apple Computer**

Built of translucent polycarbonate, the new G3's design is stunning

AN AUDIENCE WITH **STEVE JOBS**



"My business card says 'iCEO'" quipped Jobs, referring to his title, and his success with the iMac

Next Generation spoke to Apple's co-founder and interim CEO Steve Jobs about the company's strategy in the game market. Excepts from the interview follow:

NG: We've heard before that Apple is going to be serious about games. How do we know this time it's for real?

Steve Jobs: I can't speak for what happened a few years ago. I apologize for that, but I wasn't around. All I can tell you is what's happening now: A bunch of people here really like games, and also, a bunch of people here are really smart and know that their customers really like games.

We also want to be good at system performance and graphics in general, and games are a wonderful way to pound the system and the software to its limits. We just see a lot of advantages in trying to be the best gaming platform. So I just don't think that's going to change. There are too many advantages to doing it. It's just an obvious thing to do.

We've been working with ATI for almost a year now, and betting that together we could pull off the Rage 128 in this time frame. I mean, this is a heart transplant of our highest revenue–producing product. The Power Macintosh product line is our highest revenue– and profit–producing product in the line, and a heart transplant is where you stop one and start another, you know? We built that heart transplant on the Rage 128, because we really wanted to leapfrog the PC industry and we wanted to be the first people to use this.

Pentium II, a more efficient processor enables the ATI-equipped G3s to offer around 20% better performance than a P2 450 with a single Voodoo2 card.

The new G3s are built from translucent polycarbonate and feature a design inspired by Apple's best-selling iMac. One especially welcome feature (that **Next Generation** hopes all PC manufacturers emulate) is the easy-to-open side panel, which provides instant access to expansion slots. The new Mac can address up to 1GB of RAM, has room for three hard drives inside the case, and has four PCI slots, a 1GB Ethernet build-to-order option, a CD-ROM, a DVD, a Zip drive, and USB and FireWire ports. Four models are available with prices ranging from $1,599 to $2,999.

Part two of the strategy is bringing more games to the platform. According to Jobs, Apple is actively courting top-tier developers to program for Macs, and to help that effort, Apple has announced that OpenGL will be the 3D standard in future versions of the Mac OS.

During the keynote, Id Software's John Carmack (interviewed on page 70) declared, "Apple finally has its hardware and software act together with regard to 3D graphics acceleration." An announcement that *Quake III: Arena* will ship simultaneously for the Mac and PC was followed by the first public demonstration of the game — on the new G3. Also good news to Mac gamers was the report that any developer who licenses the *Quake* engine will get the Mac code. (Just 15K of that code is Mac-specific, meaning it's easy to port.) Apple stunned conference attendees with surprise announcements of new Mac games, including *Tomb Raider III*, *SimCity 3000*, *Heretic II*, *Age of Empires*, and *Tom Clancy's Rainbow Six*.

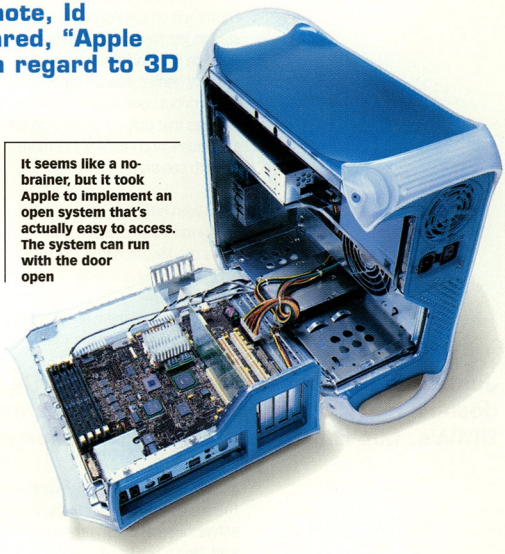
Apple also took time out to demo Connectix's Virtual Game Station, which enables Mac users to play PlayStation games on their G3s. Like the company's Virtual PC emulator, it works best with the slower games, but it could make game-friendly PC buyers more interested in the Mac until more games are available.

Meanwhile, Apple seems to be having no problem moving its hardware to the mass market. According to sales figures, more than 800,000 iMacs shipped from August 15 to December 31, 1998 — 45% of them to customers new to the platform. If Apple continues to move computers at that rate, developers will likely no longer need wooing. NG

WHAT IS IT?

This rarely seen vector game from Atari was available as a replacement kit for *Star Wars*.

During the Macworld Expo keynote, Id Software's John Carmack declared, "Apple finally has its act together with regard to 3D graphics acceleration"



It seems like a no-brainer, but it took Apple to implement an open system that's actually easy to access. The system can run with the door open

We also believe that if you want to make it easy for the consumer, you have to build it in.

We talked to some of the best game authors who told us if we could build in something great, it would make it so much simpler for the consumer and for them, because they don't have to write a zillion drivers for a zillion 3D systems and cards. They don't have to write any drivers. We're going to do all of that. We're going to put OpenGL in there, and we're going to have all the drivers written. All they have to do is just make OpenGL calls and everything else is done. There is no system configuration. There is no card to plug in. There are no drivers to load. There are no libraries to load. It's just all going to work.

We really wanted to build in the Rage 128 from the very first. Those are the kind of bets we are making and for us, it's a lot of work, but I think it's going to pay off. We're doing a lot of work on the Game Sprockets [Apple's gaming APIs]. You'll definitely see more of that. Plus, the USB stuff is perfect for games. There are all sorts of controllers coming out now, and again; you can just plug in as many things as you want, up to 127 controllers. So a lot of the other strategies we're pursuing fold really well into helping to make a better gaming platform, too.

NG: What is your strategy for encouraging developers to write for the Mac? Is Apple trying to encourage everyone across the board to write more for the Mac, or is it a more focused effort toward getting the high-profile developers to write for the Mac?

SJ: When you're trying to come back into something, you go after the most popular games, and you go after the most popular games for two reasons. First, because they are the most popular and they're going to serve more customers. Second, in general, you'll find that those are [written by] the legendary game authors, and if the legendary game authors think it's cool to come back to the Mac, then they're going to serve as role models for a lot of the other game authors."

Continued on **page 12**

Continued from **page 11**

IT IS ...

The Empire Strikes Back, Star Wars was so popular that few arcades ever bothered ordering it.

NG: Are you going to be trying to get to some of these top games to be Mac-first releases, or will they be primarily parallel releases?

SJ: Clearly, we would like some unique development down the road, but what we're doing right now is trying to work with the top-tier developers, listen to them very carefully, and build the best gaming platform in the world so they are attracted to write for it.

I have confidence that as we continue to improve and bring the kind of technology to this that I think Apple can bring — technology I don't see on the PC side — we will start to get some unique things done on the Macintosh, or quite possibly, games that are cross-platform but have some unique features that only come alive on the Macintosh. And I think we're more likely to see that."

NG: Given how many people use Wintel machines compared to how many use Macintoshes, can Apple ever hope to have the dominant game platform?

SJ: Just because there are more Wintel PCs sold than Mac, that doesn't make them better. Right? There are more Fords sold than BMWs, but that doesn't mean a Ford Taurus is a better car."

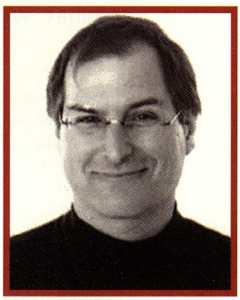
NG: Do you see Connectix Virtual Game Machine as a start for luring console owners?

SJ: I don't know. Clearly, people don't buy PCs to run Sony PlayStation games with. It may be the frosting on the cake, which I think is wonderful. Frosting tastes good. I think it will actually be pretty popular.

NG: In the past, developers said they were reluctant to develop for Mac because of its smaller installed base compared with Wintel PCs. What market share do you hope to achieve?

SJ: The active installed base of Macs is around 25 million and I don't think that's a small number. It is smaller than the PC, but it's a market that buys more software per computer. It's a market that's on the Internet at a higher rate per computer. It's a market that is certainly filled with the more creative segments of society, in terms of the customers we sell to.

There are a lot of advantages in writing for the Mac right now. I think we're on the upswing, and we're bringing a lot of new customers into the market. In percentage of sales, we're bringing in a higher percentage of new customers than the PC crowd is. I also think Apple is a company that's willing to work with some of these developers more in marketing than maybe some of the other PC companies."



Just because there are more Wintel PCs sold than Macs, that doesn't make them better — there are more Fords sold than BMWs, but that doesn't mean a Taurus is a better car

NG: So what is the advantage that Apple has that could allow it to make it the premiere platform?

SJ: One of the things you have to remember is that Apple is the only company left that makes the whole widget. Imagine being a car company where you get your engine from this Intel engine company, right? And you get your body design and your seats and everything else from this other company called Microsoft, and you bolt them together and you get to throw in the spare tire and you ship the car. Apple, however, makes everything. We're like BMW in that we make our own engines, we make our own transmissions ... We do the hardware, we do the software, we do the design, and we do the marketing. We do everything.

Apple is leading now in USB. Apple is ahead of the PC industry. The same thing is happening now with FireWire. Apple can pick a few handfuls of initiatives each year and drive them in every layer of the product, and that is worth an incredible amount when you are trying to bring innovation into the marketplace. We can make a decision that we want to build in a Rage 128 in every configuration of the model, but that isn't enough. We have the system software to deal with. We're going to put in OpenGL, and we're going to look at the whole thing as a system and tune that package to where this thing is going to have phenomenal graphics performance.

SGI is about to introduce their NT workstations and I wouldn't be surprised if we didn't have faster OpenGL performance than they do — at half the price. We're really committed to that, and that's just something no other PC vendor is really going to be committed to.

The game vendors don't like Direct3D because it doesn't take advantage of all the latest features in the new, hot chips. If a game developer likes OpenGL and Compaq doesn't deal with it, maybe they deal with the card and maybe they don't, and Microsoft doesn't care about it, they're just kind of left to be system integrated. Someone has got to be a system integrator.

Well, we think that's what we should be doing. If we do our job right, we'll make this not only really high performance, but we'll make it really easy for both the customer and for the developer. We're the last people in this business that make the whole widget, and that was being touted a year and a half ago as Apple's downfall — "Apple is too vertically integrated" — but I believe it is Apple's greatest strength. NG



Berore the Apple, Jobs and Wozniak collaborated on *Breakout* for Atari

PLAYSTATION, MEET THE MAC...

The first commercial **PlayStation emulator arrives**

Connectix, makers of the Virtual PC emulators for Macintosh computers, dropped a bombshell at the recent Macworld Expo. As Steve Jobs waxed lyrical on the future of Apple and the astounding sales of the iMac (now approaching 1 million units), delegates were treated to a demo of Virtual Game Station — a PlayStation emulator for all G3 Macs.

The announcement resurrected the barely buried questions over the legality of emulation and provided some interesting "what ifs" for the future of console and computer systems. Though the VGS only runs black U.S. PlayStation discs, a unofficial patch has already appeared on the Internet that enables it to run gold discs and official Japanese and European PlayStation titles — which is just what Connectix is trying to avoid. After all, if they can be linked with piracy or any kind of copyright or patent infringement in any way — Sony could file an injunction preventing the $49 program from being sold.

At press time, Sony's comment was "No comment," but judging by previous David and Goliath emulation battles



(Nintendo, for example), it would come as no surprise to anyone if the Sony lawyers were being assembled.

The problem for Sony (and the most likely explanation for the lack of an immediate injunction) is that it is possible to reverse-engineer the PlayStation using all original code. Indeed, when the Virtual Game Station boots a game, there's no traditional Sony start-up screen, indicating that Connectix has bypassed the system's BIOS entirely — and has even written its own copy-protection to avoid the obvious legal hassles of providing an emulator that could run gold discs.

Jonathan Garber, Connectix' CTO, however, believes the Virtual Game Station could be a help to Sony — not a hindrance.

"Our fervent hope is that Sony will realize that this extends the market for their games significantly," he explains. "This year, 800,000 iMacs have been sold so far. Wouldn't it be great if Sony suddenly found another million people to sell CDs to?"

Sony is unlikely to see it that way, but it may be powerless to stop Connectix from selling its emulator. The speed, and apparent ease, with which the VGS was created has people thinking about Dreamcast. Would it, for example, be possible to emulate the PlayStation on Sega's new machine?

"Is it feasible? I don't know, ' claims Garber." Do we have a product like that? Not here today. I couldn't say whether that's conceivable or not, to be honest. Sometimes there are surprises in hardware that limit things." Garber may be surprised to hear the response of Aaron Giles, lead software engineer at Connectix, to the same question. "I don't see why not," he said. "The Dreamcast is just a like a powerful PC."

Now that would really annoy Sony. NG

VIRTUAL GAME STATION

The emulator only runs on G3-equipped Macs and requires 10MB of RAM. Although it doesn't run all the PlayStation games we tried, it ran most of them and without a problem (though there was some slowdown on the games that required a lot of disc accessing). Unlike the PC PlayStation emulator, PSYKE, VGS doesn't, at this stage, take advantage of the texture-filtering properties of Macs equipped with Voodoo cards.









The emulator does well with games like *Invasion From Beyond*, which don't tax the PlayStation hardware



***Tomb III* was quite jerky and too dark (above), but it ran, as did most U.S. games we tried. All the shots here were taken from the Macintosh**

ARCADIA

by **Marcus Webb**, editor of ***RePlay*** magazine

SEGA, MIDWAY DEBUT NEW ARCADE GAMES

Many new arcade videogames are arriving from Sega as this column goes to press. The first three titles using their new Naomi platform (which uses elements of Dreamcast) are *House of the Dead 2*, *Crazy Taxi*, and *Dynamite Baseball*.

Also shipping is Sega's magnificent sitdown simulator *Star Wars*, which recreates action highlights from all three films. And, they're debuting *Magical Truck Adventure*, a two-player standup deluxe with a big screen and podium-style player stations; foot pedal and hand lever controls fit the rail-car theme.

America's top arcade video factory, Midway Games, has released *Hydro Thunder*, a sit-down with boat-racing theme. It comes in the traditional Midway driving cabinet (seen earlier in the *Cruisin'* games); an Intel processor powers the proprietary hardware system, and up to four units can be linked. The company says it's testing "extremely well" in San Diego and Chicago; the game got its official U.S. arcade debut the first week of February.

Also coming from Midway is *NBA Showtime: The NBA on NBC*. It's a dual-license 3D videogame for four players, featuring two-on-two basketball action. From the team who brought you *Blitz*, *Hangtime*, and *NBA Jam*, it ships the first week in February, though execs claim the NBA lockout could delay it by a month.

U.S. SENATORS PRAISE GAME RATINGS

Senate watchdogs Joe Lieberman and Herb Kohl were joined by the National Institute on Media and the Family during a press conference in November in which the citizens group gave arcade videogames an "A for effort" for the development of a Parental Advisory System on videogame content. But the senators gave arcades an "incomplete" for inconsistent implementation. In other words, a lot of arcades still haven't pasted those red, yellow, or green ratings stickers on their older videogames.

The press conference focused mainly on the level of violence in consumer titles; the Institute referred to the arcade industry as a "bright spot" in its report card. However, Sens. Lieberman and Kohl promised to maintain a vigil over implementation of the Advisory System.

The Institute visited locations in California, Louisiana, Minnesota, and New York and found 30% compliance with the game rating system. Citing a recent visit to an Appleton, WI, arcade that used the stickers, Kohl praised the industry for "making good on its commitments."

WAL-MART BANS VIOLENT GAMES

Wal-Mart has ordered the removal of arcade-style videogames that contain either animated violence or strong lifelike violence according to industry ratings. As one of the top U.S. customers for arcade games, their new antiviolence policy will cause tremors in executive suites from Chicago to Tokyo.

The games were scheduled to be removed from stores by the first of the year, announced Wal-Mart's Director of Other Income, Kent Reeves. "Any videogame shooting or dismembering people is considered inappropriate by Wal-Mart standards," he added. More than 50 titles were banned, including current hits such as *Site 4*, *House of the Dead*, *Time Crisis II*. "In keeping with the family atmosphere inherent at Wal-Mart stores, videogames or pinball machines with sexual content are inappropriate" as well, Reeves concluded.

WILL DREAMCAST RESCUE SEGA?

Japan's arcade game factories are still in serious trouble. Sega reported from Japan that although their arcade division remains profitable, company-wide midterm revenue was down 20% and net income was down 76% from the same period a year ago. Their securities (sold on the Japanese stock market only) have been rated as junk bonds by the U.S. ratings group, Moody's Investors. However, Sega insiders claim Moody's is behind the curve, given the successful launch in Japan of Sega's new Dreamcast console and the platform's sales potential for its U.S. market launch later this year.

Judging from fiscal reports released by other Japanese arcade factories, the entire arcade sector is hurting right along with Sega. Jaleco's arcade revenue was down 58.3%, Konami's net income dropped 42%, Tecmo's arcade grosses fell 55%, Namco's arcade game sales dropped slightly, and Capcom's overall revenues dropped 6%.

ANGEL ENTERS ARCADE ARENA

A major new U.S. manufacturer of arcade videogames? Yes! This year, Angel Studios (Carlsbad, CA) will become a creator and manufacturer of arcade videogames, including some using Sega's new Naomi platform. Also, as part of a joint venture called CoinSoft, Angel Studios has started development of its first arcade game under the working title of *T-Rex*. Gearing up for all this, Angel has appointed DisneyQuest alumnus Kevin Williams to the newly created post of development director of amusement. Angel Studios was founded by Diego Angel in 1984 to pioneer the development of some of the most fun and technically advanced 3D realtime interactive entertainment in the market. They're probably most famous for the virtual reality special effects in the movie *Lawnmower Man*, and are also the creators of the Nintendo 64 hit *Major League Baseball Featuring Ken Griffey Jr.*

TRIVIA CHALLENGE

Match the memorable line to the game:

1 Beware, I live

2 Can love bloom on the battlefield?

3 Come Get Some

4 Press Start Button to fire Shockwave

5 Finish him!

6 Ouuch!

7 Rise from your Grave

8 Stay awhile. Stay forever

9 Kick, Punch, it's all in the mind

10 ...you, the master of unlocking...

11 Prepare to qualify

12 Elf needs food, badly

A Gauntlet

B Altered Beast

C S.T.U.N. Runner

D PaRappa the Rapper

E Metal Gear Solid

F Pole Position

G Resident Evil

H Impossible Mission

I Mortal Kombat

J Sinistar

K Duke Nukem 3D

L Crossbow

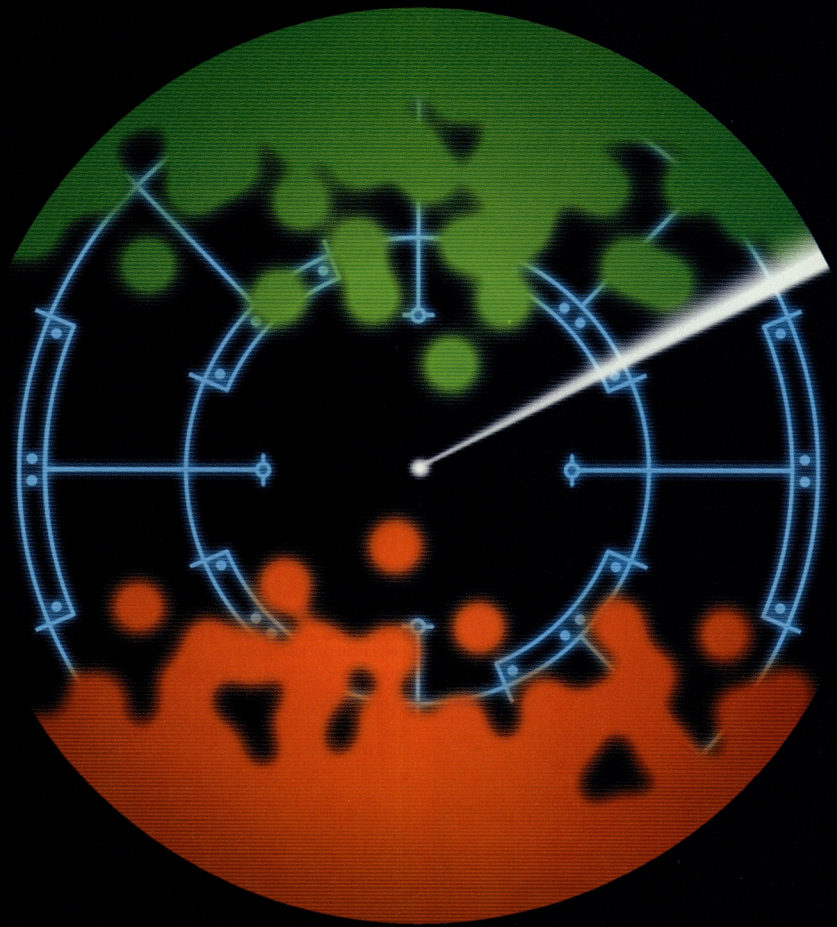








Answers: 1-J, 2-E, 3-K, 4-C, 5-I, 6-L, 7-B, 8-H, 9-D, 10-G, 11-F, 12-A.



ALIENS VERSUS PREDATOR

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FOX INTERACTIVE

RATING PENDING
RP
ESRB

IN THE STUDIO

***Tomb Raider III* is out** the door, so what's next for Core? How about a new title called *Eden*. No word on what kind of game it is, but wouldn't you bet it's a third-person character adventure?



While 989's *Cardinal Syn* didn't add any cachet to the studio's portfolio, the team is taking another stab at fighting genre. Sony insiders report that an internally developed project called *Akuden* is looking very promising. Not much more was known about the game at press time, but chances are the game will have been announced by the time you read this.

With each press release, **Next Generation** continues to marvel at how many different ways GT CEO Ron Chaimowitz can express how excited he is to have top developers joining the GT family. Continuing with 1998's company-gobbling trends, GT has recently acquired two major developers, Legend Entertainment and Reflections Software.

Legend had already been working with GT on *Wheel of Time*, and is also working on an *Unreal* level pack, as well as *Unreal II*, (*Unreal* creators, Epic Megagames, have opted out of doing the sequel themselves).

Reflections Software is known for its work on both *Destruction Derby* and *Destruction Derby 2*; the company's first release for GT will be *Driver* for the PlayStation and PC. The developer's second PC title for '99, titled *Steam* (see screenshot) is a 3D, third-person adventure with a gothic twist.



In another strong move, GT has secured a publishing agreement with Infinite Machine, a California-based startup formed by *Jedi Knight* game designer Justin Chin and programmer Che-Yuan Wang. Infinite Machine's first title, a 3D action game for the PC, should ship some time in the year 2000.

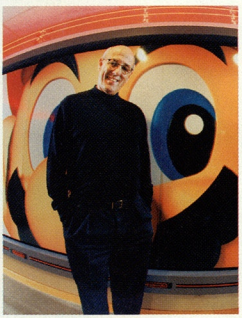
While unannounced at press time, Singletrac's *Rogue Trip* team is departing to form a new Utah-based studio under the GT umbrella.

What's next for Take 2 Interactive? While it has been looking into purchasing several of its developers, the company is poised to announce a new interactive label, named Rock Star. No word what it's about, but **Next Generation** hopes it's something along the lines of a Rage Against the Machine/DMA Design collaboration.

Sony Computer Entertainment America has announced its intention to publish *Legend of Legaia* in the U.S. This 3D RPG developed in Japan by SCEI/Contrail was produced by Takahiro Kaneko, who also produced *Wild Arms*. The game, which features an innovative fighting system, sold very well in Japan and is expected to hit U.S. shelves in March.

NINTENDO COOL ON NEW PLATFORM

Slow-burn strategy for Nintendo 64 successor, **says Nintendo's Peter Main**



Peter Main is bearish on the prospects for an early next-generation console launch

Despite the failure of the Nintendo 64 in Japan, and the huge amount of buzz being generated by Sega's Dreamcast, Nintendo says it will not be rushing its next-generation platform. Specifically, Executive Vice President of Marketing and Sales, Peter Main, has responded to various reports on "Nintendo 2000" in an interview with **Next Generation** sister magazine *Games Business*. He stated that the manufacturer has never been first in a hardware generation, and never would be.

"While I acknowledge that the early adopter plays a role we've never felt compelled — in the 8-bit arena, the handheld arena, the 16-bit arena, or the current 64-bit arena to be first, in order to meet what we feel are first indicators of early adopters."

He added: "Each hardware generation has a potential of 35 to 45 million pieces of hardware in this country. We have an understanding of what kind of development resources are available to us. Against that we plot what is the best strategy for maximizing sales over a 60 to 70 month time frame against that universe. And I think to get totally focused on the first million units to get sold is a mistake that hardware and software people have got to resist."

That said, R&D on Nintendo's next-generation system is underway. Graphics hardware is being developed by a startup called ArtX, a company founded by ex-employees of Silicon Graphics. Silicon Graphics, which had previously been Nintendo's graphics partner, reacted by bringing a lawsuit against ArtX. That suit was later dropped and a "letter of understanding" was issued.

Nintendo of America President Minoru Arakawa has offered tantalizing clues as to the hardware's storage format. At a recent press conference in Japan he said, "It is by no means certain that the next console will use cartridge ROM. We are currently researching all types of media to determine what is the most suitable format, including DVD."

But despite soft Japanese sales, Nintendo is in no great rush to supersede the Nintendo 64. Although the machine is being dubbed "Nintendo 2000" in the frenzied online chat rooms and more excitable elements of the press, a launch next year is believed to be unlikely. Main added: "It's not that we enjoy being second, but what we do enjoy is watching other people's mistakes, trying to learn from those mistakes and ensuring again that we're in the best position to maximize the bigger numbers that are possible over that time frame." NG

MARK CERNY **STRIKES OUT**

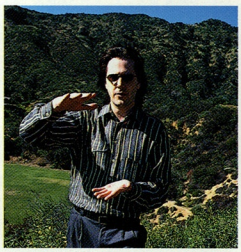
The man who oversaw the birth of Crash Bandicoot sets out **on his own and forms a very different kind** of game company

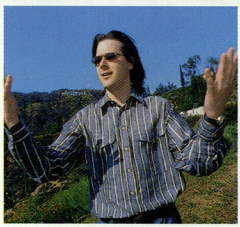
Mark Cerny (see the **Next Generation** interview in **NG 43**) has one of the best track records in the industry, ever since creating the classic *Marble Madness* for Atari at the tender age of 17. His last gig was a four-year stint at Universal Interactive, where he oversaw the creation of *Crash Bandicoot* and *Spyro the Dragon* — games that are notable for being some of the few U.S. designed games to be top sellers in Japan.

As it happens frequently in the industry however, now he's striking out on his own. But Cerny Games is built on a very different model from most videogame startups. It's less a standalone development company than a design consultant firm, with Cerny working in much the same capacity as he did at Universal. That is, come in during the most crucial phase of production and focus on play testing, play balance, and making sure a game is intuitive to control and fun. "The priorities are a bit different," Cerny explains his plans for the company: "The concept is to place working on a good game first, working in an enjoyable environment second, and not worry so much in the short run about gaining money or prestige. Practically speaking, this means: find good projects and work on them as producer, game designer, or technical programmer, and target working with people who are completely capable of making games without you, but will work with you anyway because of the increased likelihood of making a stellar product."

Cerny Games currently has exactly two employees: Mark Cerny and Michael John (who was also a producer on *Spyro* and *Disruptor*). Currently, they're working with Insomniac on its next title for Universal — which means he's doing exactly the same job for exactly the same people with exactly the same helper (one suspects he's getting paid significantly more for it though). They are, however, also working with a second developer on another title that is very hush-hush at the moment.

Still, Cerny insists, "If this were the film industry, the Cerny Games idea would be completely unremarkable. Since the studio system ended there aren't movie 'developers' with on-staff producers, directors, writers, and production designers; instead, people come together, create a film, and then move on to their next project. The music business is another example ... look at the synergistic but independent relationships between U2 and Brian Eno! There's no reason to believe that games won't move to a more project-oriented model like these other entertainment media have." NG





The man who managed to make *Crash* a big hit in Japan can do the same for your game — just hire his company, Cerny Games



Cerny credits his success to the underlying philosophy in all his games: "Keep the games easy to start playing and very smooth once you've started. This allows everyone to have fun, not just the hardcore"

HARDCORE

My tedious economics lecture had just ended and I felt the primordial urge to play *Gauntlet: Legends* at the campus arcade. There was a problem, though. Coin-op games require cash, and at the moment I was swimming in red ink. But I wanted the last Rune stone so badly! I had to find money fast! I tried my ATM card but I had less than $10 in my account. Then I ran to the bank and wrote a check for $5 but the clerk said I only had $2.43 in my account. In a moment of desperation, I sold my economics textbook for a few dollars, even though I still needed it for my final. Ah yes, not even the powers of Skorne could keep me from playing *Gauntlet* on that day.

Ryan Smith
Columbia, MO
sasquatch@starmail.com

RUMOR CHECK: SEGA

The Rumor: Sega's new CEO, Shoichiro Irimajiri, pessimistic about Dreamcast's chances for worldwide success, is about to step down and accept a position in the United States as head of General Motor's Delphi subsidiary, which is being spun off into an independent company. Considering that Irimajiri knows more about Dreamcast — and its real chances for success — than anyone, this move bodes very poorly for Dreamcast's success.

The Reality: Irimajiri earned a great deal of respect during his years at Honda USA, and was asked to sit on the Board of Directors of the newly independent Delphi. The Director position involves meeting several times a year with the other directors, offering advice and making sure the performance of the company matches expectations.

BIG IN JAPAN

Next Generation reports from the Eastern front

LA Machine Guns



***LA Machine Guns* is a sequel, of sorts, to Sega's 1997 hit *Gun Blade*, and features randomized enemies**

Another product of Sega's ever-prolific AM3 division, *LA Machine Guns* is the sequel to 1997's low-profile shooting game *Gun Blade*. This time around, your heavy-caliber weaponry is attached to a futuristic assault vehicle rather than a helicopter, and the action is set in the year 2025. As a member of the counter-terrorist group SIFAT, you must defend the West Coast against the Rage of Machines (ROM) android militia that has invaded Los Angeles. While that sounds like nothing new (just another excuse to shoot the bad guys), *LA Machine Guns* does have a couple of interesting tricks up its proverbial sleeve.

Rather than forcing you to blast through a succession of increasingly difficult stages, AM3 has made four of *the game's* five areas immediately available. Given the locations selected, and that the game uses the latest spec Model 3 hardware, it's little wonder the developer wanted to show off its game. In addition to Los Angeles, you can mow down the enemy in Las Vegas, Alcatraz Island, and an underground Yosemite base, before visiting Death Valley for the final showdown. Finally, unlike coin-op shoot-'em-ups, the revamped AI randomizes the appearance of targets, so that no two games are the same. Currently playing in Japan, *LA Machine Guns* is certain to arrive here before to long, and is surely a candidate for Dreamcast.

SELLING BIG IN JAPAN THIS MONTH

1. Yu-Gi-Oh! Dual Monsters (Konami) GB
2. Crash Bandicoot 3 (SCE) PS
3. Mobile Suit Gundam: Char's Counter Attack (Bandai) PS
4. Genso Suikoden 2 (Konami) PS
5. Ehrgeiz (Square) PS
6. Pokemon Card GB (Nintendo) GB
7. Mario Party (Nintendo) N64
8. Pikachu Genki Dechu (Nintendo) N64
9. R4: Ridge Racer Type 4 (Namco) PS
10. Elie's Atlier 2 (Gust) PS

Tenkomori Shooting

In the tradition of its frenetic coin-op hit *Gun Bullet*, Namco's *Tenkomori Shooting* consists of 25 similar shoot-'em-up mini-games. Featuring detailed, sprite-based graphics, the various stages offer simple pleasures such as blowing away cockroaches, picking off crows, blasting UFOs (with rockets), and shooting cells to separate them.

As in *Gun Bullett*, a basic objective is set at the commencement of each game: hit 16 tanks, 20 crows etc. Failure to succeed, as ever, results in loss of a life. As with many recent coin-op titles, the emphasis is on attracting the "light-user" into arcades, rather than offering any meaningful gameplay experience. A PlayStation version is imminent, then.



It may not feature the latest technology, but *Tenkomori Shooting* is sure to an arcade favorite in Japan

Magical Truck Adventure

Developed by the same team that created Sega's shooting game *Lost World*, *Magical Truck Adventure* is similarly aimed at luring women and couples into arcades. And with colorful, fantastical visuals (produced by the Model 3 Step 2.1 board) and a novel physical interface, AM3's new title may well hit its target.

You control the game via matching hand-operated rail carts, pumping the lever up and down to achieve forward motion. As with Taito's *Densha Da Go!* the carts are guided along tracks past various events. A pair of foot-pedals allows you to tip up the cart onto either side to avoid obstacles, while pressing both will force an all-wheels jump. Whether watching *MTA* being played matches the hilarity of Namco's *Final Furlong* remains to be seen.



Save your girlfriend from evil, wear blue pants and 'pump' your truck — that's *Magical Truck Adventure*

Progress is made through a selection of only three of six possible stages, to increase the appeal for successful players. The next level selection is made at the end of each stage, while a mystery stone can be passed between players to decide which cart will lead the way. However, as with *Lost World*, *Magical Truck Adventure* attempts to encourage partners to co-operate, with a percentage score for how well you've pulled together. A refreshingly alternative title for the new year, and surely the last word in mine-cart levels. NG



***Magical Truck Adventure* is designed to appeal to couples, hence *The Sound of Music* look ...**



TRICKY SLIDERS

Capcom's snowboarding game for PlayStation will be in Japanese stores by the time you read this. Tapping into the current trend for all things snowboarder (fashion, in particular), *Tricky Sliders* makes good use of all manner of co-promotions and sponsors, and has extended the character customization facility to accommodate a wide range of clothes and equipment. Early reports suggest a rather average title with a strong two-player mode. A U.S. release under the title *Freestyle Boardin'* is imminent.




Pioneer
EL HAZARD 2
The Magnificent World
SUGGESTED
13
UP
Volume English Dubbed English Subtitled
Volume 1 PIVA-1541D PIVA-1541S
Volume 2 PIVA-1542D PIVA-1542S
Approx. 60 min. running time each.
English Dubbed $24.98 S.R.P.
English Subtitled $29.98 S.R.P.
Chaos times three! First, Miz Mishtal gets a drunk Fujisawa, to propose to her. Unfortunately Fujisawa gets cold feet and goes off on an extended backpacking trip - leaving Makoto to break the news to everyone else in the middle of the wedding ceremony! Then, princess Fatora impersonates Makoto attempting to seduce both Shayla Shayla and Nanami! Meanwhile, to make Makoto's life even more crazy, Jinnai has managed to find and awaken another goddess of destruction - Kalia. Unfortunately for everyone, Kalia does not follow anyone's orders, and truly desires to destroy everything in El Hazard!!
Each volume contains at least one collectible, limited edition card (while supplies last, card set split between El Hazard 2 and the re-release of El Hazard 1).
Don't miss out on these new adventures in The Magnificent World of El Hazard!
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Call Pioneer Customer Service at 800-421-1621 for more information or check out our website at www.pioneeranimation.com
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DREAMCAST COUNTDOWN

Next Generation tracks the progress of Sega's dream machine

Shenmue revealed



***Shenmue* has no rendered cut-scenes — everything you see here is realtime. The only question mark that exists concerns the exact level of freedom the player is allowed**

On December 20 at the National Convention Hall in Yokohama, Japan, Yu Suzuki unveiled what has variously been referred to as *Virtua Fighter RPG*, *Project Berkeley*, and (finally) *Shenmue*. It is perhaps the most eagerly awaited of all the announced Dreamcast titles, and marks Suzuki's second foray into console gaming following more than a decade of top-drawer coin-op development under the auspices of Sega's legendary AM2 division.

After waiting for hours in a line that stretched around the block, fans were shuffled into the auditorium where they — along with **Next Generation** — were treated to a detailed presentation on the game, beginning with the theme song, sung by a hugely popular Chinese pop star. After the two MCs had taken us through a little of the history of the project, which started in 1994, Suzuki explained his reasons for developing what he sees as a unique title. He sited the complexity and inaccessibility of games such as *Virtua Fighter* and claimed that he had, for a long time, wanted to make a game that anyone (take note, Nintendo) over 5 years of age could play. Which went some way toward explaining the game mechanics of *Shenmue*, which was running on the large-format screen above the podium.

Set in modern-day China, *Shenmue* features four main characters (from a total cast of 500) and more than 1200 different locations to explore. Sega has divided the action elements of the gameplay into Quick Timer Events and Quick Timer Battles, both of which require only single-button responses to progress — leading some to suggest that the gameplay is a little more *Dragon's Lair* than *Virtua Fighter*. In one scene, for example, the hero is chasing someone down an alley. Instead of having to direct the character, the player simply waits until an option arrow appears on screen to decide which way to run. These on-rails sequences are slickly done, but they seem at odds with Suzuki's assertion that *Shenmue* is a fully free-roaming experience. The same was true of the combat sequences, which offered only limited interaction.

Sega's commitment to creating a living, breathing, *Shenmue* world was underlined by the need for players to take jobs and gamble (in the form of a sub-game) in order to make money for their characters. In addition, Suzuki introduced a feature not yet seen in a video-game (although familiar to the few who purchased *Trespasser*) — realtime manipulation of objects. When switching to the first-person view, the player must learn to use the character's hands to sift through objects, search bookcases , drawers, and so on. The detail of the objects is enough to make this a game in itself, as Suzuki proved as he struggled to pick his way through a pile of tapes found in one of the rooms.



The demonstration ended with a guest appearance by Mr. Hidekazu, star of the "New Sega" ad campaign in Japan, who congratulated Yu Suzuki on his efforts. The Japanese public will have the same opportunity when Shenmue ships sometime in the spring.



***Shenmue* features a first-person mode for exploring certain interiors and manipulating objects (top)**

Sega sends in Sonic to back up *Virtua Fighter*. Despite stunning visuals, the results fall **just short of expectations**

Sonic Adventure









***Sonic* might not be the deepest game ever, but it is always a breathtaking roller coaster ride of speed and beauty**

With a slew of release titles that did little in the way of capturing the imagination, Sega has been counting on *Sonic Adventure* to provide the killer-app for its new supersystem. In many ways, it is everything Sega could have hoped for, showcasing the superior graphics capability of Dreamcast, and weighing in with a big-name mascot — the spiky blue one himself.

Unfortunately for Sega, look past the glitz and the hype and *Sonic* doesn't quite push the boundaries of gaming as much as the *Zeldas* and *Metal Gears* of the world, and falls a bit short of expectations.

There's no doubt that the game tries to be as epic as possible. Honestly, when you first see the game in action on one of the better-looking levels it's impossible not to be overwhelmed by the sheer speed and color displayed on the screen. Nothing on a home system has come close to the graphical ambitions *Sonic* displays in its more brilliant moments, and when *Sonic Adventure* shines, it really shines brightly.

Pick up the controller, however, and the experience is a bit more down to earth. Sonic Team has done a wonderful job of converting the blue hedgehog from his 2D ancestry, and this game plays exactly as you would expect a 3D *Sonic* to play. Unfortunately, with









If there is one thing *Sonic Adventure* can boast, it's an impressive amount of variety. You never really know where you'll be or what you'll be doing next. At one point you even get to play a little *Sonic Spinball* (center)

FORMAT
Dreamcast

PUBLISHER
Sega

DEVELOPER
Sega (Sonic Team)

RELEASE DATE
Out now (Japan)

ORIGIN
Japan



***Sonic Adventure* is filled with its own unique personality. The high-res visuals and rich color palette dramatically demonstrate Dreamcast's potential.**

that come some of the weaknesses that were inherent in the original. Namely, that most of the time you just fly straight through the levels at unimaginable speeds with a minimum of exploration. There are parts of the game where you just hold forward and pray that Sonic is doing all right — hardly the stuff to keep Miyamoto awake at night.

Where *Sonic* scores highest is in its unbelievable amount of spectacle. Whether you're being chased by a killer whale, flying through the sky on a helicopter, or racing down the side of a building upside down, *Sonic* Team has succeed in making sure things never slow down. There is rarely a moment in a level where the player is not caught up in some sort of high-speed graphical wonder, and the resulting adrenaline rush more than justifies the time you spend with the title. Style (sometimes over substance) has always been the *Sonic* way, and his Dreamcast debut proves to be no exception.

Unfortunately (but not surprisingly), the game feels rushed. Levels are riddled with dropped frames and slowdown, bad collision detection (there are places where you can fall out of the environment), and various other bugs. The camera also has quite a few problems with bad placement and oddly reversing angles. The result is a game that feels as if it was rushed through QA, and while Japanese consumers are generally more tolerant of bugs, we were irritated.

Despite this, *Sonic Adventure* still entertains. There are six characters to complete the game with so, despite the title's ease it still requires some time to finish. The bugs are what keeps this version from five stars — we hope they'll be removed before a U.S. release. The bottom line, however, is that this a *Sonic* game through and through — high speeds, lots to look at, wonderful graphics, and great music. And that's probably the highest compliment we can pay.

RATING ★★★★☆



***Sonic Adventure* is the fastest game you're ever likely to play, and the levels are designed to get you up to peak velocity as much as possible**

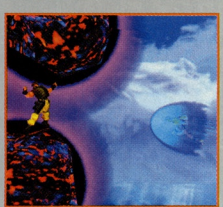
The directions in which Sega is aiming to take its new game system will **pave the way for newcomers. Next Generation** met with some esteemed industry figures in Tokyo's Aoyama district hoping for **a glimpse of the future**

All Talk

PSYCHIC FORCE 2012

Currently only 30% complete, this arcade conversion is destined to arrive on Dreamcast some time in the spring. Offering 10 characters and an ambitious 360 degree playing field(with the camera moving both above and beneath the characters), *Psychic Force 2012* will be the third high-quality fighting game for the console, along with *VF3tb* and *Power Stone*. Providing it doesn't succumb to the current (and infectious) slippage disease, Taito's popular coin-op could be one of the brighter spots on the increasingly anemic spring release schedule.





The Dreamcast version of Taito's arcade hit, *Psychic Force 2012*, looks impressive



Photography: Hiroki Izumi

Sega's Tetsuya Mizuguchi believes that for the coin-op industry to survive, it will need to offer new experiences

Past assemblies of game designers hosted by **Next Generation** have proved rewarding for readers and participants alike, allowing participants to voice frank views on the industry and the direction of game development that would otherwise remain unsaid. As one of 1998's most significant events, Dreamcast's Japanese launch seemed an ample excuse to repeat the exercise in the console's home territory. So, one evening in mid-November, prior to the console's launch, four leading lights of Japan's development community were invited to wine, dine, and discuss the implications of the emerging next-generation console battle.

Sega's Yuji Naka and Tetsuya Mizuguchi (*Sonic* Team leader, and *Sega Rally* producer respectively) were on hand to represent Dreamcast, while Yoshiki Okamoto, Capcom's managing director of R&D — and overseer of the *Street Fighter* and *Bio-Hazard* series — provided the third-party slant. Also present was experimental developer Yoot Saito (formerly of Art Dink), drawn to Dreamcast by the possibilities of developing via Windows CE. With two famed coin-op creators at the table, it seemed only polite for conversation to commence on that topic.

"The preoccupation with new technology has meant that we haven't spent enough time **striving to make better games"**

Tetsuya Mizuguchi

Next Generation: With the advent of Dreamcast, the standard of console graphics seems to match that of arcade machines. If the gap between the two is closing as a result of high-end graphics being made available in the home, what, in the future, will differentiate arcade and console titles?

Yoshiki Okamoto: That's difficult to answer. We develop both arcade and console titles, but I only ever worked on low-specification hardware for coin-op titles. Our CPS-2 board had lower specs than a Saturn or a PlayStation, but that's changed now that we're working with Dreamcast and Naomi — they will enable us to work on the same level for both home and arcade. It will be much easier. In addition, we used to make mainly 2D fighting games, but now we can do 2D or 3D conversions from and to the same chip. I believe this

will make both arcade and console users happy. Hardcore arcade players will be able to play the console versions, and vice versa; they'll be able to train on the console to play better in the arcades.

NG: But that doesn't suggest that coin-op games will be different to console titles. Isn't it, in fact, suggesting that they'll be more alike?

YO: The playing time will be different, of course. In a shoot-'em-up, for example, a final boss will be more difficult to beat in the arcade version than in the console software version.

Tetsuya Mizuguchi: At the moment, consumer hardware graphics are getting much closer to arcade quality. In order to keep the two areas separate we may have to make some physical games which cannot be offered to home console users; connecting up three monitors or having a giant screen, for example. Or making more of networked games, or designing a peripheral that you can bring to the arcade cabinet, then connect and play. It may take time, but I believe arcade games will have to move in these directions.

TM: I don't believe the arcade games industry is shrinking…

YO: No, it's not.

TM: I do think the consumer market is getting bigger…

YO: I don't agree, although the demand for hardware is growing. The latest hardware purchasers do not buy software — PlayStation owners don't buy software any more, they'd rather borrow games from their friends [laughs]. The first PlayStation buyers, three or four years ago, were buying lots of software, but now buyers don't want to.

Yuji Naka: It's sad, really…

TM: Honestly, games are becoming less and less interesting. As the hardware capabilities have increased, new possibilities for games are almost endless, and so development time has increased, and a lot of money is being invested in the creation of titles. Graphics and sound are improving all the time, but the preoccupation with new technology has meant that we haven't spent enough time striving to make *better* games. If we don't change this, we will never make better games. [Mizuguchi notices that Okamoto and Naka are in discussion on the opposite side of the table] Okamoto, what do you think about this?

YO: [Surprised] I don't know, I wasn't following the conversation, I was talking about the wine with Naka! [Laughter all round] OK, I'll pay attention …

YN: I agree that as higher hardware specifications have been reached the content of games has suffered. It's been like this since consoles with CD-ROMs arrived. When there were storage limits, people were making a lot of effort to make their games more original and playable.

YO: If it becomes possible to make good-looking games too easily, the number of games that have stunning visuals but little gameplay will increase. Actually, the number of interesting games hasn't decreased — it's just that the number of uninteresting games out there has increased. Casual gamers are attracted by games with great visuals but it's not until later that they discover the gameplay is nonexistent. Casual gamers shouldn't buy games based on their own judgement! They should let an experienced gamer buy it, and if

MAKEN X

The first Dreamcast title from veteran Japanese coders Atlus is a dark, adult-oriented affair. *Maken X* features a postapocalyptic sado-masochistic world populated with scantily clad characters (much like Shiny's own *Messiah* title).

Characters known as the Maken are able to jump, in spirit form, from one creature to another (again, like Shiny's *Messiah*), and each has its own unique abilities. As well as wowing the public with its art, Atlus are hoping to achieve a smooth 60fps framerate and 3D sound compatibility to take advantage of the Dreamcast's 3D sound features. No release date has yet been announced.









To say that the subject matter of *Maken X* is a little left-field is putting it mildly

FLIGHT SHOOTING

Squaring up to Namco's proposed *Ace Combat*, Konami's *Flight Shooting* takes full advantage of the Dreamcast's superior graphics to provide an arcade-style flight-sim. There will be a total of 30 different aircraft to fly, including attack helicopters, stealth bombers, transport planes and of course, fighters such as the Tomcat and Rafale. Though early, the quality of the graphics is already impressive, with realtime shadows on all the buildings and some gorgeous stages that that include mountains, deserts, and, oddly enough, a subterranean ice level. *Flight Shooting* will hit in Japan sometime in the spring.





Konami's *Flight Shooting* makes impressive use of the Dreamcast's graphics muscle

after one month this person says the game is still interesting, then it really is worth buying.

NG: Would you agree that slow software sales are due to a lack of imagination on the part of developers? Do you think new genres are going to appear? How old is the *Street Fighter* series?

"Casual gamers are attracted by games with great visuals but it's not until later that they discover the gameplay is nonexistent. **Casual gamers shouldn't buy games based on their own judgement!"**

Yoshiki Okamoto

YO: About 10 years old…

NG: Right. So do you think that the series should still exist in 10 years' time?

YO: I would like the series to be there in 10 years. But I think the time where everybody was playing *Street Fighter II* is over. There are still some fans of *SFII* that we can keep entertained; such games are becoming specialized to cater to the hardcore gamer or serious fan. Capcom has designed games that only players who were familiar with the previous titles in the series could play! I think 95% of titles should be given over to sequels and series while the remaining 5% consists of brand-new games. But right now, we want to make games that can be played by first-time gamers.

NG: PDAs, such as Sega's VMS or Sony's PocketStation, are the current console phenomenon. But are they really a revolution or just a flash in the pan, the latest gimmick?

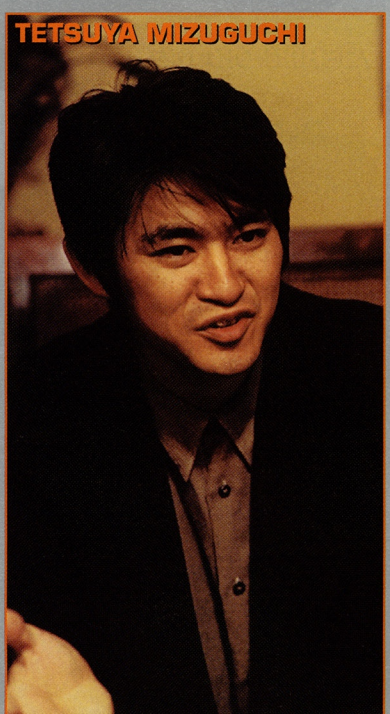
YO: They're a novelty, like polygons were a few years ago. Everybody is saying, "We have to use it." I believe you should only use them if you need to. But if you don't want to use them, then don't. If you have a car, for instance, you use it, but for getting to nearby places you can walk. When I bought a car, I drove it to the nearest supermarket because it was new, I was proud of it and wanted to drive it! [Laughs] That same novelty factor is true of the PDA. [Okamoto owns a Ferrari]

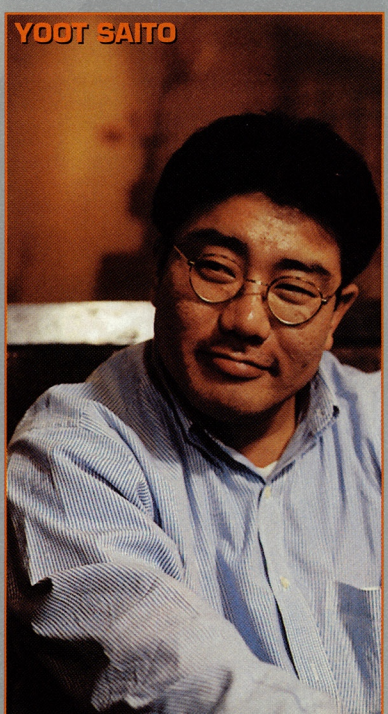
YN: There are some possibilities for evolving game design with the PocketStation and the VMS. Portable hardware will improve — I would really like to have a portable Dreamcast. Why does portable hardware have such low-quality graphics? I would like to have a Game Boy with Dreamcast's capabilities. When technology reaches that level I'll be happy.

TM: Those specifications would be very interesting in a portable …

YN: I don't know in which direction videogames are going, but if portable hardware improves to that level, it could be very exciting.

YO: That time is still some way away!







Yoot Saito expounds on the virtues of voice-recognition technology as the future of the humble controller

YN: Not really. I think there are some interesting possibilities with the VMS. An improved version of PocketStation is sure to be released, too …

YO: There are lots of things that could be taken further. There are always more possibilities, but you have to select what you want to improve. If you choose to improve the portability, it's to the detriment of other specifications. Or, likewise, a color screen to the detriment of the cost. In my opinion, the PocketStation is very fashionable. It's seen as a cool accessory — when you take it out of your bag, it's a stylish games console.

YN: I didn't think people looked good playing Tamagotchis. The PocketStation isn't any different. I prefer the portable computer IBM is advertising at the moment. It's very sleek and stylish. But it's a Windows machine — I'd really like a games machine that looked like that. Personally, I think it would be great to put a games console in the front of the car! [Laughs]

NG: Before the arrival of the 32bit machines, games were played on consoles using virtually identical digital controllers. Thanks to Nintendo, the leap to analog control has been made. How would you like to see joypads develop?

Yoot Saito: With the first computers you used a keyboard to communicate. When the mouse arrived, it revolutionized the way we communicate with the PC — you can even draw using a mouse. I would like to use a remote control-type system that's easy for anyone to understand. I want to leave the console close to the TV. I thought about this remote controller for a long time and I wanted to make it for a PC. I tried to adapt the concept for a home console using a regular TV. But to make it for a console game I needed a hardware company willing to make a voice-recognition system and a microphone.

TM: I had similar ideas. I came to the console industry from an arcade background. With arcade games you can build any controller you want. I have used so many controllers over the last three months — an N64 one, a PlayStation one, a Saturn one, and a Dreamcast one — and my ability to think objectively became limited by the controller. So I stopped holding a controller for a while and some fresh ideas came to me. I can't reveal any of these plans yet, but there are many possibilities.

YO: I want something that everybody can use: You simply turn on the power, hold the controller, and you play. It has to be natural. If I was to make a golf game for the N64, I want to use exactly the same controls that Shigeru Miyamoto used for *Mario 64*. Players shouldn't have to pay any attention to this and should be able to play the game very easily. We shouldn't be intimidating users — we should just make use of an existing control system.

NG: Finally, as console hardware performance has increased, and graphics have become more important, development teams have grown a lot larger in size. Do you think this is a good trend for game development?

YO: You'd better ask Naka… [Laughter all round]

YN: We made the first *Sonic* with five people – seven including the sound designers. That amount of people was best, because in small development teams everybody has the same objective. When 15 people are designing a game there are always different opinions being voiced. There were about 100 people working on *Sonic Adventure*. At that scale you can't listen to everyone's opinions — it's very difficult to handle!

SEGA RALLY 2 UPDATE

In what could either be seen as a commitment to quality or just plain slippage, Sega has once again put back the release of its premier driving title, *Sega Rally 2* to "sometime in 1999." Siting problems with debugging the network modes, Sega apologized to the fans for the delay, but with *Climax Landers* also slipping from February 25 to June 10, those fans may have to go back to their PlayStations for a while to give the software time to catch up with the dream.





***Sega Rally 2* has been delayed *again*. The network game is to blame, Sega says**

Capcom pursues a revolution — not evolution — of the fighting genre **with its first Dreamcast title**

Power Stone

FORMAT
Arcade, Dreamcast

PUBLISHER
Capcom

DEVELOPER
Capcom

RELEASE DATE
February (arcade)

ORIGIN
Japan

With countless sequels and variants of *Street Fighter II* now behind it, Capcom has performed what many would consider a complete about-face with its latest title, *Power Stone*. Due to appear first on Sega's new Dreamcast-compatible Naomi arcade hardware, the game owes little — if anything — to its predecessors, and instead relies on a number of new elements previously unseen in the genre.

Power Stone retains the lavishly detailed visual style and animation of Capcom's past 2D fighting titles, yet it's built on a completely polygonal game engine. Unlike the recent *Street Fighter EX2*, however, *Power Stone* is an entirely 3D game. Players can go anywhere within the detailed stages, fighting on multiple floors, stairways, and even rooftops. This freedom of movement also allows for elaborate attacks, which often involve launching at opponents from ceiling rafters and swinging around lampposts.

This go-anywhere gameplay is enabled by the ability to seriously interact with the environments. Players can not only grab countless objects — including park benches, flower pots, and crates — and throw them at their opponent, but they can trigger a number of stage-specific events as well, such as shelves of vases that collapse when their supports are kicked out. Many stages also boast a good amount of mechanical dangers, including giant grinders and molten metal pits.

The game's eight characters — including a British biplane pilot and a bizarre knife-wielding mummy — each boast several unique attacks which, unlike in the *Street Fighter* titles, are performed via different combinations of the game's three buttons: punch, kick, and jump. Also unlike Capcom's previous fighting titles, *Power Stone* does not allow blocking — instead, players must dodge hand-to-hand attacks or deflect incoming projectiles.



***Power Stone* delivers the same lavish detail in 3D that has become commonplace in Capcom's 2D titles.**

A traditional super move meter has also been forfeited in lieu of the namesake "power stones," of which there are three to be found during each match. Once acquired, they enable the player's character to change into a more powerful form that lasts only a short amount of time, but during which they can deal three immensely powerful super attacks (in addition to powered-up punches and kicks).

Despite this profoundly unusual gameplay, *Power Stone* aims to remain accessible. Capcom has instituted longer rounds to ensure that fighting doesn't become too hectic, and while the three-button control allows for more than enough variety in attacks, it remains easy to grasp in the heat of battle.

Capcom is hopeful that *Power Stone*'s unique gameplay will usher in a new era of fighting games, not unlike that which began upon the 1990 introduction of *Street Fighter II*. From what **Next Generation** has seen and played of the game thus far, it may very well see its hopes fulfilled. NG



The Naomi hardware's range of effects are most apparent once characters transform into their more lethal forms



The game enables characters to cling to background objects, pick up power-ups, and evade their opponents by climbing to higher ground

stop it before it multiplies.

[the plague.]







[not the praise.]

["Stunning spell effects" —*EGM*]

["Deep, involving storyline...beautiful graphics" —*GamePro*]

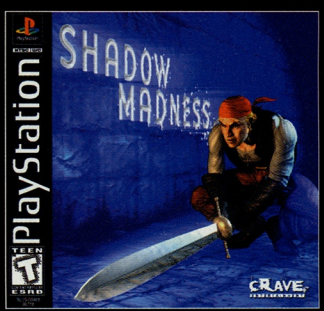
["Beautifully rendered" —*Next Generation*]

["Loaded with exquisite music." —*Gamer's Republic*]

["Unravels like a good mystery...epic" —*PSM*]

["A highly interactive world." —*PSExtreme*]

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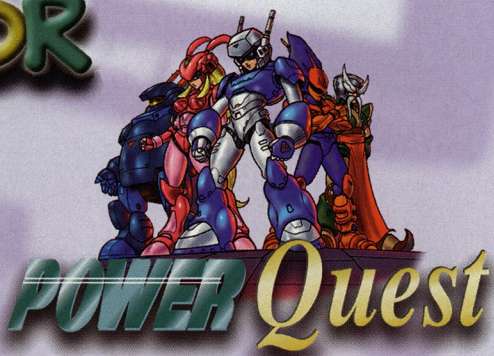


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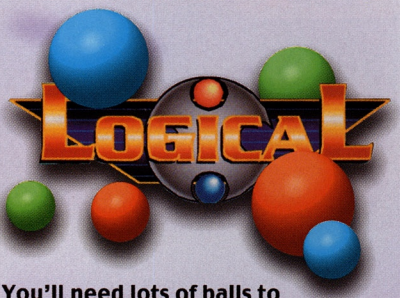
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SUNSOFT

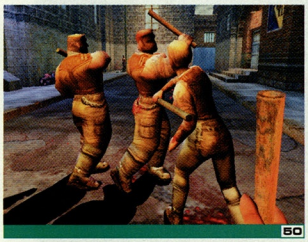
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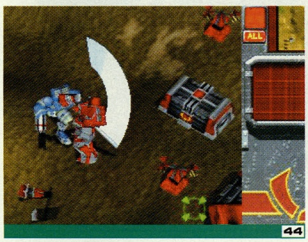
Clan Wars PC **Star Ixiom** PlayStation **Soulbringer** PC
Sinistar Unleashed PC **Dragon** PC **Ace Combat 3** PlayStation

ALPHAS

Tales from the world of game design













Every game is not destined for greatness. Some make an attempt, and some of those are in the pages that follow

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DMA DESIGN

Scotland's premier developer gears up for a bumper 1999



***Tanktics* will be one of the first DMA games of 1999 to arrive. It's PC only, and fiercely gameplay driven (it also features two trademark DMA elements — tanks and sheep)**

David Jones leans back in his chair and smiles. "We tend to do stuff that's a bit strange," he says. "Publishers are very wary of investing in new ideas if they have no model to measure them against. Gremlin, however, saw that they could use some more original stuff in their portfolio. I think we're a pretty good fit."

In 1997 DMA Design was sold to Brit-soft publisher Gremlin Interactive and Jones was made Creative Director of both companies, a role he seems ideally suited for. Jones and DMA, the company he founded in 1989, are all about gameplay — often at the expense of flashy graphics and box-friendly selling points. In 1998, the Scots developer produced the controversial hit, *Grand Theft Auto* for PlayStation and the acclaimed *Space Station Silicon Valley* and *Body Harvest* for N64. Jones and his gang are on a roll — and it's thanks largely to a unique design process.

FORMAT
PC/N64

PUBLISHER
Gremlin Interactive (U.K.)

DEVELOPER
DMA Design

RELEASE DATE
1999

ORIGIN
U.K.

TOYS ARE US

"What's unique? What's going to make this work? Why would I want to play this? Those are the first things I ask people when they come to me with a game design," reveals Jones. "I'm pretty jaded now, so it takes something pretty interesting to get my attention."

How about a game featuring animals that morph into other animals (*Space Station Silicon Valley*)? Or a gangster game set in a world that reminds players of their childhood toy cars (*Grand Theft Auto*)? Or a game where the primary goal is to *save* creatures instead of killing them (*Lemmings*)? Jones likens the game design process to making toys; each game needs to have its own unique set of features that makes it interesting and fun to play with. No one at DMA would go to Jones with a design for a straight driving game or realtime strategy clone — it wouldn't be a great career move.

"If someone said to me 'Dave, I want to do a driving game.' I'd be down their throat in a second. I'd ask, 'What's different about it?' Does that mean we wouldn't do a driving game? No, but if we did, it probably wouldn't start out as a driving game. Instead, we'd come up with an idea for a vehicle that had a unique control method, then we'd decide



All the action is realtime, with players using a floating crane/magnet to manipulate the objects





The game is divided into four time periods — prehistoric, medieval, modern, and futuristic. The medieval (above) uses a dragon as the crane



***Tanktics* is a year late, following problems with the crane design**

what rules we could apply to it, and then design a world that fits those rules. That's how we work."

A look at the 1999 DMA lineup proves the point. The three titles, *Tanktics*, *Wild Metal City*, and *Clan Wars*, each aim to provide gamers with an engaging — and unique — experience.

The first game, *Tanktics*, is a quirky cartoon puzzler for the PC that defies classification. Players control a hovering crane that builds custom tanks using pieces created by a machine called a Part-O-Matic. To function, the Part-O-Matic needs resources gleaned from the landscape. The crane, in effect, acts as a giant "hand of God" and can be used to pick up pieces of enemy tanks (to add to your own), to control tanks, or to harvest resources.

The dynamic between the production of the tanks needed to rule the landscape and the need to fuel the Part-O-Matic creates the game. After that it's a case of vying with the CPU-controlled opponent for mastery of the landscape.

All the trademark (read: darkly humorous) DMA touches are here. You can, for example, pick up one of the sheep that wander the fields and dip them in one of the numerous lava pits, setting them on fire and turning them into a handy weapon that rains woolly death on your enemies. It's also possible to wait until the CPU has built a particularly menacing-looking tank before racing in with your crane and dropping one of your own "brain units" (a radar) on top of the pile — effectively giving you control of your enemy's latest creation, before running amok inside the enemy base.

No one at DMA would go to Jones with a design for a straight driving game or clone — it wouldn't be a great career move

Tanktics is a tough game, but it's oddly addictive. Graphically, it seems a little primitive (the cartoon-style landscapes are unlikely to appeal to the U.S. audience), but the simple, clean layout and imaginative level designs foster an instinctive understanding of exactly how this toy works. Most importantly, it proves Jones' formula: Establish the rules and let the player play. This philosophy, though present in every DMA title, can be seen at its purest in its second title for 1999, *Wild Metal Country*.



The cartoon graphics are colorful and clear, but may seem (to those who have spent money on 3D cards) a little simplistic

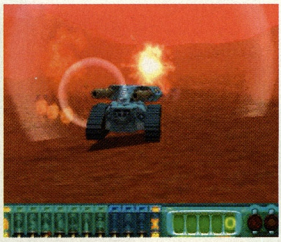
WILD THINGS

Once again, the tanks are the stars of the show — only this time the emphasis is on arcade action. You fight it out in one of five different tanks in an effort to collect all eight Power Cores scattered across an extensive playing field. So far, so average,

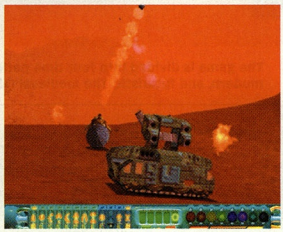


To travel over the snow, you need to outfit your tanks with special tracks













***Wild Metal Country* (PC and N64) relies on tried-and-tested deathmatch game mechanics to drive it, with the added twist of an incredibly realistic physics engine. It's addictive**

you may (rightly) think, but *Wild Metal Country* has an ace up its sleeve — an impressive physics engine.

Just as in Dreamworks' Dino-yawn, *Trespasser*, the world in *Wild Metal Country* obeys the same laws of physics that we do. Everything you can see has a weight to it; move it and it obeys the rules of inertia, shoot it and the fragments spin into the air and land with force (damaging anything they hit). In addition, each tank has individual handling characteristics determined by the physics engine. A tank with a wide base is difficult to flip over but slow to turn; whereas a taller, lighter tank is susceptible to flips but much faster over the terrain.

Tank control harks back to the arcade classic, *Battlezone*, with separate keys on the PC version allocated to each track (DMA still hasn't confirmed how this will work on the N64 if they convert it) and another four to control the turret. Mastering the controls isn't easy, but it opens up the game enormously. Beginners tend to use just the tracks, while more experienced players master the turret, allowing them to move and fire in different directions.

The terrain, which appears at first glance to be a simple affair, is key. Taking the high ground gives you a tactical advantage, but it's hard to get up there — especially in the heavier tanks. Watching your tank stop only feet from the crest of a hill and slide slowly back into a gully quickly teaches you the benefits of mastering such a physically real environment. What goes up must come down.

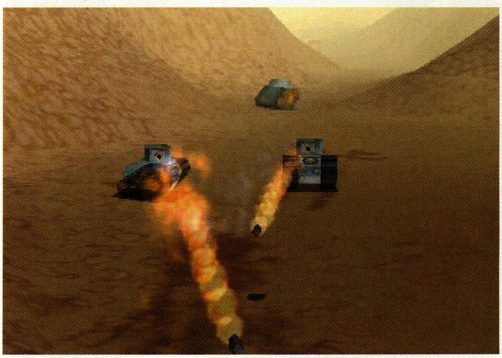
Just as in Dreamwork's dino-yawn, *Trespasser*, the world in *WMC* obeys the same laws of physics that we do

Where *Wild Metal Country* will shine brightest, however, is in multiplayer mode. The variety of tanks and the numerous weapons (including a giant magnet that pulls your tank toward any





Each tank has its own unique handling characteristics; some are built for speed others for strength



Enemy tanks converge (above). The turrets' elevation determines the trajectory of the bombs







These renders illustrate the kind of gameplay you might expect from *Clan Wars*: Bloody mayhem

Siege engines are used by the attacking force to destroy the enemy castle



mines your opponent may have left lying around) makes for a wickedly vicious deathmatch experience. The only question that hovers over the game concerns, once again, the graphics. In these post-*Unreal* days DMA's insistence on functional visuals over 3D accelerated flash may leave some gamers cold.

TOY CASTLES

DMA's third title for '99 is perhaps the most interesting (and certainly the most commercial). Still in the early stages of development, *Clan Wars* is a realtime action/strategy game with (surprise, surprise) a unique twist. Instead of mining resources, amassing forces, and crawling around a map a la *Command and Conquer* (and every clone since), you simply decide whether to attack or defend for the duration of each battle.

The attacking force spends its money on building siege engines and arming its troops, and the defending force spends its resources building the best castle it can to defend itself from the attackers. Once the building period is over, the game switches to the battle, which is played out in fully scalable realtime 3D. And this time, the graphical bells and whistles are all present and accounted for.

As in *Tanktics*, the real joy of the game comes from manipulating the environment. Building a castle to withstand the onslaught of either a CPU or human opponent, is — quite literally — only half the battle, but it is incredibly engrossing. It's easy to see why. It's a toy that appeals to the kid in all of us — the kid who never grew up and still has a great time messing around with building blocks (or, in this case, parts of castles).

This is probably a pretty good summary of DMA as a company: By taking the basic building blocks of games — the concepts and ideas — the teams are encouraged to play and create. In an industry where new ideas are hard to come by it's a policy that attracts and keeps talent.

By taking the basic building blocks of a game — the concepts and ideas — the teams are encouraged to play and create

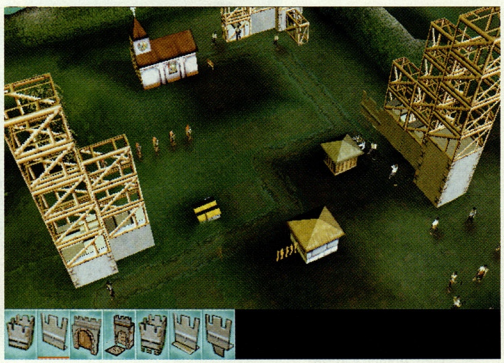
"You know," reflects Jones, "we're pretty lucky, because we only do original games, and that turns on a lot of people. People here get a chance to create something new, and they're encouraged to be as creative as possible."

And he means it, too. NG





It's all the best bits of the *Braveheart* movie rolled into one game. Competition for Eidos?



Players manipulate the basic building blocks to construct the most impregnable fortress possible — and then defend it in realtime

HYDRO THUNDER

No *Cruis'n World*, Midway's latest coin-op racer really takes you off-road

Recently, it seems arcade developers are looking at console games for design inspiration. Nowhere is this more evident than in Midway's new 3D boat racing game, which borrows bits and pieces from *Wave Race*, *Turbo Prop Racing*, and *Power Boat Racing*. However, in traditional Midway fashion, *Hydro Thunder* injects the boat-racing genre with just the right amount of arcade steroid to guarantee good quarter drop.

Players race to complete each of the 11 tracks (8 selectable, 2 bonus, and 1 secret). Booster fuel must be collected and used sparingly — to either bolt past the competition or knock them out of the way. Many of these booster packs are accessible only if the player uses the ramps and/or shortcut routes scattered throughout the race.

There are 13 boats to choose from, and each has its own distinct advantages. For example, the *Tidal Blade* is very fast but lacks the control (ironically) of the *Miss Behave*. Other boats soar longer in midair or boast a sharper turning radius.

Visually, the game is stunning, with bright and highly detailed textures, realistic weather effects, and well-designed tracks. The engine is equally as impressive with smooth, fast framerates (a consistent 30fps), and realistic physics. In fact, the boats will react appropriately to 3D waves, terrain, and other obstacles.

Next Generation took a nearly complete *Hydro Thunder* for a test-drive, with an eye toward the Dreamcast version planned for later this year, and came away impressed. Could this game be Dreamcast's *Wave Race* killer? With a good conversion, there's certainly a chance. NG







***Hydro Thunder*'s levels include the Far East, the Arctic Wastelands, Post-Apocalyptic New York, and the Greek Isles.**



As in the boat-racing games before it, *Hydro Thunder* litters the water with a wide variety of obstacles





Think *Hydro Thunder* looks a bit like a PC game? Maybe it's because the game is powered by an Intel processor Pentium II, Celeron 333MHz, and a Voodoo 2 board



Moves to learn include a "jump on demand" trick that allows players to avoid obstacles, such as this opponent

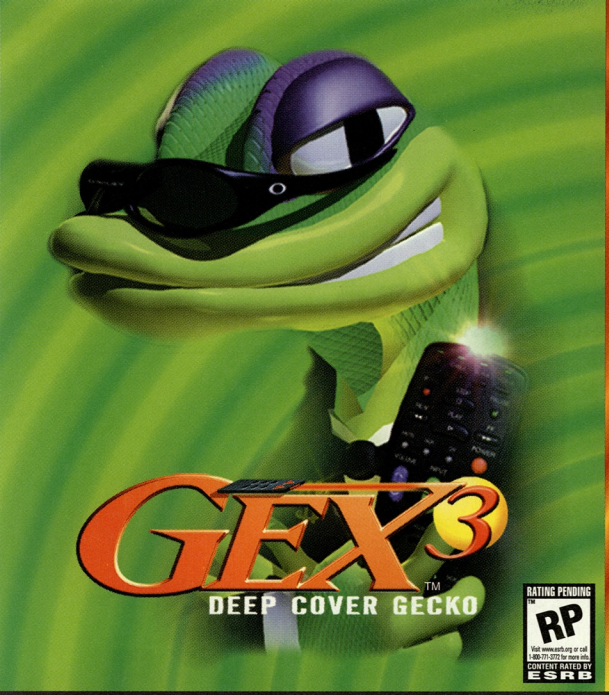
FORMAT
Arcade, Dreamcast

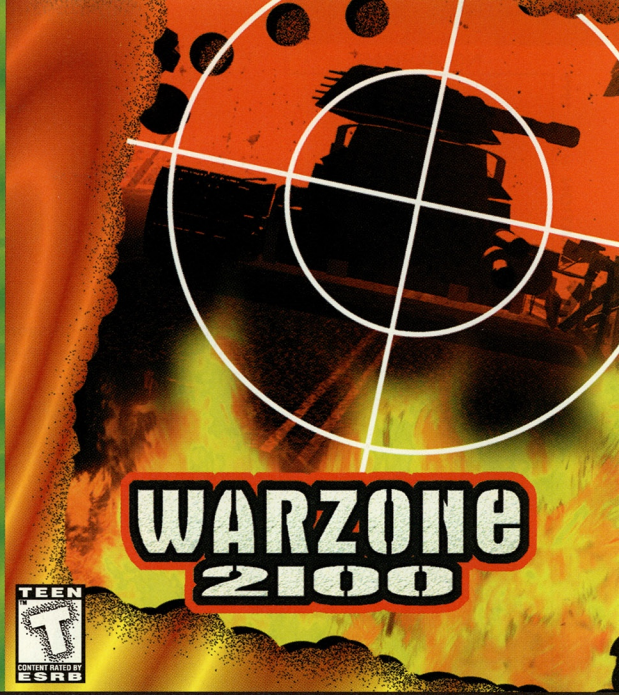
PUBLISHER
Midway Games

DEVELOPER
Midway Games

RELEASE DATE
Arcade: March
Dreamcast: Q4

ORIGIN
U.S.

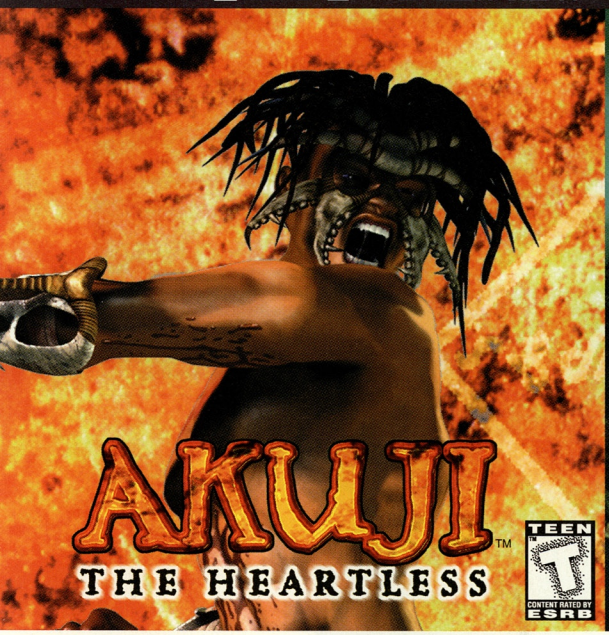




RATING PENDING
RP
CONTENT RATED BY ESRB

TEEN
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CONTENT RATED BY ESRB

ONLY EIDOS BRINGS IN THE NEW YEAR WITH A BANG!





TEEN
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CONTENT RATED BY ESRB

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PlayStation

Pumpkin Studios

CRYSTAL DYNAMICS

EIDOS INTERACTIVE



3 XTREME

How much life is left in this long-running PlayStation franchise?



In one-player mode, a player will race against five competitors



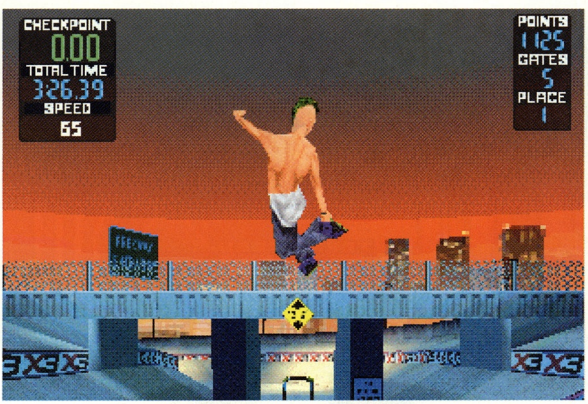
Not counting their successful sports titles, one has to wonder if 989 Studios hasn't lost all the ground it may have originally gained by fully dedicating itself to the Playstation. And as another first-generation franchise is about to receive its third installment, the question is, can *3 Xtreme* redeem where *Twisted Metal 3* failed?

Like those before it, *3 Xtreme* will capitalize on a playable mix of racing and combat. Players will have a selection of 12 characters who race on either skateboards, in-line skates, or BMX bikes. (The street luge from the first game, and the snowboarding from *2 Xtreme* are justifiably gone.)

According to Associate Producer, Joe Brisbois, however, the fighting in *3 Xtreme* won't feel as secondary as it did in *2 Xtreme*. But combat will be limited to punching opponents, as the buttons once reserved for kicking are now used to execute tricks. Players still earn points for hitting the gates on the tracks, but now they can also earn them by successfully pulling off midair tricks. Points can be redeemed for equipment upgrades, which is a nice trick as this year, 989 has licensed real equipment manufacturers. Upgrades include legitimate gear from K2, Trek, Santa Cruz, and others.

When **Next Generation** visited 989 in December and saw *3 Xtreme* with several tracks barely running at a decent framerate, the game looked very early for what 989 believes will be a March release.

While the game makes the move to true 3D and features bigger characters and motion capture animation performed by pros, these are exactly the cookie-cutter, back-of-box bulletpoints that we'd expect from a third-generation PlayStation product. Ultimately, well-balanced course design, solid controls, and well-tested gameplay will be required to make *3 Xtreme* really worth playing. Can all that happen by March? NG



The design calls for big jumps, enabling players to get plenty of air to pull off tricks







Five fictional locations (from city streets to a suburban park) make up the 32 tracks: 12 Season, 10 Time Trial, 5 Freestyle, and 5 Head-to-Head

FORMAT
PlayStation

PUBLISHER
989 Studios

DEVELOPER
989 Studios

RELEASE DATE
Spring 1999

ORIGIN
U.S.



www.eidosinteractive.com

EIDOS INTERACTIVE

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SOULBRINGER

It contains the usual RPG clichés, but it also boasts an advanced combat system, sophisticated magic features, and an epic storyline

When Gremlin's marketing department asked for an outline of *Soulbringer* to help them prepare press releases, they didn't bargain on a 430-page story. It documented the heroic exploits of Harbinger, "a warrior-king who died by the hands of those he sought to destroy — the legendary demon Revenants," and explained how, as Soulbringer, the player would take up his mantle in a bid to free the land "from the yoke of the Demon Lords."

Is *Soulbringer*, then, a game steeped heavily in the heritage, or in the clichés, of role playing?

"Both," says Paul Green, designer and author of the epic story. "I think there are certain elements in RPGs that role-playing gamers want to see but, having said that, there are no dwarves and elves, none of that Tolkien stuff in this game."

"The original idea was to come up with something with the depth of *Ultima VIII*, but a bit prettier," elaborates Steve Lovesay, *Soulbringer*'s lead programmer. A 3D engine viewed from a third-person perspective provides this prettiness, but pretty is hardly the best word to describe the dark, hard look of the game — a look that sets just the right tone for demonic possession.

Soulbringer also uses the same engine for everything — cut scenes and combat included — to create a seamless feel. "Personally, I don't like the *Final Fantasy* approach to combat at all," reveals Green. "It takes you out of the environment completely. You've got no warning there's something up ahead."

Integrating the combat system with the rest of the game is proving to be the toughest aspect of the experience. Nevertheless, as producer Don Kirkland says, "We're really trying to make the combat system realistic so that when you fight it's not just people standing on either side of the screen waving swords at each other. Because it's a 3D environment, when someone swings a sword we can do proper collision on the sword — it'll stop on a model's arm and blood will then pour out of the wound. It means we can have a very advanced combat system."

Another advanced feature is the game's sophisticated magic system, the Seculorum. Based on five different elements — earth, wind, fire, water, and spirit — each represented by a segment in a circle, the Seculorum responds to the way the player acts during the game. The more the player casts, say, a fire-related spell, the larger the fire segment







The idea behind the game was to create a better-looking version of *Ultima VIII*, despite the dark overtones that serve to underline the demonic central theme

FORMAT
PC

PUBLISHER
TBA

DEVELOPER
GREMLIN

RELEASE DATE
JUNE

ORIGIN
UK







The plot develops as you progress through the game and, unlike other RPGs, *Soulbringer* requires you to return to the same location a number of times







The 3D engine used for the third-person perspective is, in RPG terms at least, very capable









becomes and the easier fire spells are to cast — the drawback being that the spells from the other elements become harder to cast. "In order to be a true elementalist," Kirkland asserts, "you have to make sure you balance out the spellcasting of all the different elements."

As important as the mechanics of an RPG are, the *Soulbringer* team recognizes that plot has a major part to play. At the beginning, the player knows very little, only the myths of Harbinger, the local folklore. For most of the game's first five acts, the player has no idea of their role in a much grander story — a deliberate strategy on the part of Green.

"Why give the player everything all at once?" he asks. "They're not going to take it all in, and you'll leave nothing for the rest of the game."

Thus, *Soulbringer* begins with your arrival in the small village of Madrigal, in the middle of winter. Your dying father has asked you to search for your eccentric uncle. Your uncle offers to teach you magic, so long as you pay him. To earn money you find odd jobs around the village and pick up stories about Harbinger's mythic struggle with the demons. At a local festival, your destiny is revealed and you are transported to the Hex, Harbinger's old tower and your home base for the next four acts of *Soulbringer*'s story.

Returning to the Hex is a key feature of the game, one that gives it a real edge over its competitors, Kirkland claims.

"Unlike a lot of RPGs, you return to the same place many times. Madrigal, for instance, is where you start and you come back to the town throughout the game."

"As your reputation increases," Green adds, "you find loads of merchants and travelers coming to Madrigal to find you. The town fills up as the game progresses until, by act five, it's a thriving community with lots of different races, all allied under your banner."

The five acts of *Soulbringer*'s story are broken down into three different scenario categories. Primary scenarios contain everything concerning the main story, secondary scenarios help you enhance your character, and tertiary scenarios exist just for fun.

Playing time for this five-act epic should be a minimum of 50 to 60 hours, five times bigger than Gremlin's (and Green's) earlier *Realms of the Haunting*. "If you can do one act in 10 hours, you're doing well," states Kirkland. "You're also not doing any of the tertiary quests and probably none of the secondary quests, either."

With the game's emphasis on plot, realistic combat, and seamless gameplay, **NG** does wonder what place hit points, experience points, encumbrance, and other throwbacks to pencil-and-paper RPGs have in *Soulbringer*?

"I know exactly what you're saying," replies Green, "but it's a way of informing the player, 'You're getting better.' Your die-hard role players love that sort of stuff."

"We're trying to make the combat system realistic so that when you fight it's not just people standing on either side of the screen waving swords at each other"

Those die-hard role players definitely have something to look forward to in *Soulbringer* — and if Gremlin achieves all it has set out to, many more fans will be confronting their demons. NG

DRAGON

Eclipse's newest game wraps combat and puzzle-solving in a Chinese myth





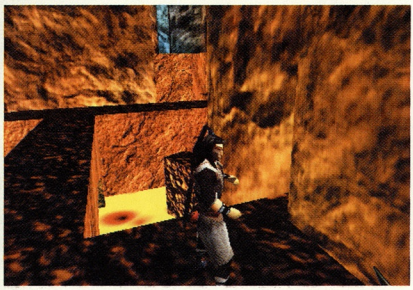


The game wil feature a mixture of motion capture and handmade animation









These environments, taken from pre-alpha levels, show the detail in the textures



The Vampire character should be familar to fans of Hong Kong action movies. He'll float, though, not hop

Combining a free-roaming RPG action adventure with a fighting-game quality engine isn't a new concept — John Romero says it was his original vision for *Quake*, and Square even tried it with the Quest mode in *Tobal #1*. Until *Dragon* (the name will change before it ships), however, no one has devoted an entire project to the idea or managed to execute it well. Enter Eclipse and a company whose name is increasingly tied to innovative ventures in the game industry: Microsoft.

Although start-up Eclipse has only one game under its belt (last year's *Jack Nicholas* for Accolade), its employees have experience in the game industry everywhere from Infocom to EA to 3DO to Origin. And Eclipse has already built the engine on which the game will be based, the impressive Genesis 3D, which supports such features as realtime light defraction, true mirrors, vertex morphing, and soft-skin polygon characters. (Although the source code costs $50,000, the engine, documentation, and SDK are available, royalty-free, for potential developers at http://www.genesis3D.com.)

To enable the combination of exploration and fighting, the camera follows the player while they are exploring, but pulls to a side view during fights. Although this camera control mechanism was disastrous in 989 Studio's best-forgotten *Spawn*, it worked well in an early version of *Dragon* that Next Generation saw.

The story is based largely on Chinese mythology. You take the role of either the grandson (slower but stronger) or granddaughter (faster but weaker) of a martial arts master, who has been kidnapped and placed in the dungeons of Quinggong by your father. Quinggong is the Teetering Palace, a temple that borders the mountains, the ocean, and the spirit world. Your job? Infiltrate the temple, defeat your father's army of supernatural beings, and rescue your grandfather. Unlike many games, however, the back-story actually relates to the game on many levels, from the





The game will feature numerous examples of colored lighting

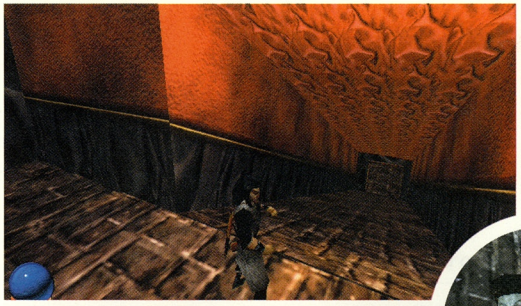
FORMAT
PC

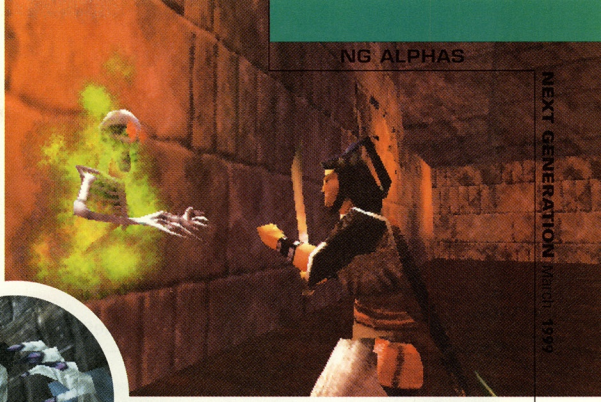
PUBLISHER
Microsoft

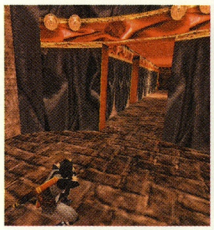
DEVELOPER
Eclipse Entertainment

RELEASE DATE
Q4 1999

ORIGIN
U.S.



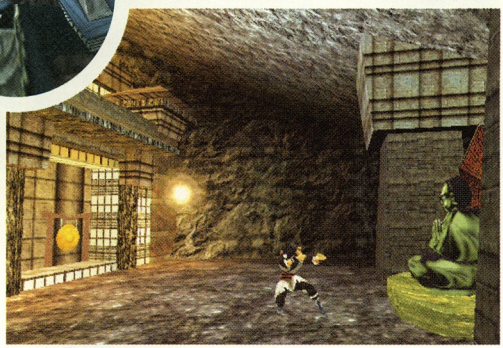








As players descend under the temple and into the montain, the environments and creatures they encounter will grow more mystical



The game boasts a number of special effects (top) which are integrated into puzzles and gameplay, not just used gratuitiously





In a refreshing break, the female characters will actually wear appropriate clothes (top)

character design to the architecture of the world to the fighting and magic styles.

Although play balancing has yet to begin (which may change things dramatically), the game is about 50% combat and 50% exploration and puzzle solving. The puzzles, thankfully, look to be more than just the "find the switch" dreck that has come to characterize too many action/adventures. In one room, for instance, players are confronted with a river of lava they must cross. Too wide to jump, the solution is to smash a huge clay pot in the room, causing water to flow onto the lava, cooling it.

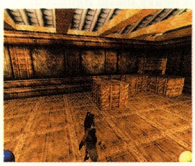
Players fight by using a combination of martial arts and supernatural powers (spells) and grow in skill (by learning new fighting moves and spells) as the game progresses, and separate bars will measure physical and spiritual health. Although Eclipse plans to make combat moves customizable (to make the game more accessible to users less familiar with fighting game conventions), the developers assure **Next Generation** that players "won't be able to assign a huge combo move to a single button." This is a real fighting game, not a *Final Fight*-style beat-'em-up, where enemies can be defeated simply by button-mashing.

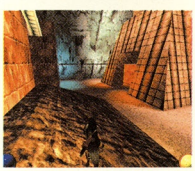
The architecture and environments evolve from traditional to fantastic as players descend beneath the temple. Microsoft Product Planner Jon Kimmuch says, "As good as the architecture looks, our aspirations are quite a bit higher. We want lots more wood — it's going to be lots more organic than what you see in a lot of run-and-guns." The team is hoping that the characters are equally impressive.

The puzzles look to be more than just the "find the switch" dreck that has come to characterize too many action/adventures

To enable the integration of fighting game action and exploration, Eclipse is using a combination of motion-capture and hand animation. Still, creating the right look and feel of the fighting is a major challenge, and it will be on the quality of the fighting that *Dragon* succeeds or fails. Eclipse understands this and will be devoting the majority of time between now and shipping to fine-tuning this crucial game aspect.

Already, the game's environments contain a level of design sophistication that is impressive for such a young company (one example: doorways are fairly wide, so players will never have the frustration of crashing into the door-jam while trying to run away from a monster). If the fighting can match the exploration and environments, Eclipse Entertainment could find that the trip from start up to superstar is a short one. NG





The camera swings from an over-the-shoulder view to a side view during combat

METAL FATIGUE

Is there anything left for Psygnosis to bring to the realtime strategy table?







With a 3D engine and a multilevel play feature under its belt, *Metal Fatigue* offers much more than giant anime-style robots smashing each other to bits





A heavy metal fight is in progress. Your eye is inexorably drawn to the sight of the brutal blue robot playing percussion on his hapless foe

The wheels have come off the realtime strategy bandwagon. And it's no surprise; with so many developers jumping on board, the genre has ground to a halt under the weight of countless freeloaders. Fresh impetus is needed, and this is where Psygnosis' *Metal Fatigue* comes in. Though inspired by realtime greats like *Red Alert* and *Total Annihilation*, *Metal Fatigue* will stand or fall on the successful execution of its twin innovations: multilevel play and giant customizable robots.

The multilevel play translates to three battlefield layers, with the traditional ground war spilling into underground conflict and into space in the tussle for low-orbit supremacy. On the surface, the usual RTS factors hold sway: Robots rule the earth while bases, defenses, and cradles of industry must be established among the dips and curves of the uplifted 3D landscape. However, mastery of a map cannot be achieved unless you also control the geostationary asteroids above.

Captured with aerospatial units, these orbiting stones can be transformed into huge weapons platforms for battering the planet. You play all three operational theaters at once, and the windowed interface will enable you to juggle between air, ground, and subterranean campaigns simultaneously.

Psygnosis is also preparing an almighty combination punch with its metal behemoths. Known as Combots, they dwarf other units and are the focus of battle thanks to their modular design. Via research and industrial espionage, you can develop or steal new technologies for your war engines and slot them together to make individual Combots composed of torso, arms, and legs. Body parts offer combinations of speed, strength, and jumping ability, while weapons include a Katana sword, power swords, buzz saws, missiles, and jet packs. Weight is a factor, so compromises will have to be made to keep a robot moving.

Backed by a respectable-looking 3D engine capable of multimetric perspective in the *Myth* style, *Metal Fatigue* has every chance of breaking the RTS factory mold. NG









The Katana sword is a powerful weapon that also proves relatively lightweight — a factor that can affect the robots' mobility

FORMAT
PC

PUBLISHER
Psygnosis

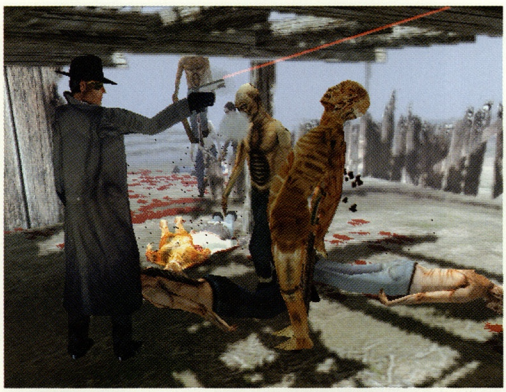
DEVELOPER
Psygnosis

RELEASE DATE
May

ORIGIN
U.S.

NOCTURNE

3D masters TRI turn their sites from vehicles to humanoids







The lead character bears a suspicious resemblance to Dark Man (top)



The carnage can get excessive, but the gallons of blood pale next to zombies tossing heads

After demonstrating its mastery of vehicular 3D with *Monster Truck Madness*, *CART Precision Racing*, and the recently released *FLY*, Terminal Reality decided to strike out in another direction — the third-person action adventure. Although the company isn't revealing many details at this point, the gameplay should be familiar to anyone who has played *Resident Evil*: There are plenty of zombies and other horrific monsters to kill.

The *Nocturne* engine seems tailor-made for the horror game concept, since it supports volumetric fog and lighting and realtime shadows and reflections. Unlike most games, where fog exists only as an opaque shield to mask pop-in, in *Nocturne* it behaves like real fog — drifting in and out of scenes and helping to create an exceptionally eerie atmosphere. The lighting and shadows are equally advanced — each is rendered in realtime 3D, as are reflections from mirrors. Environments are entirely persistent, and react realistically — shoot a wood wall and a bullet hole appears (and stays). Shoot a concrete wall and expect a ricochet.

The NightMoves character engine is equally advanced. The skeletal-based animation, which supports both motion-capture and keyframe animation, is surprisingly advanced and offers such effects as morphing and the ability to tear characters limb from limb. The player or NPCs, of course, can use discarded limbs, as weapons — it's not unusual to blow an arm off a zombie only to have him pick it up and attack you with it.

The AI in the game isn't devoted only to characters. Although none of the game is prerendered, the camera will be fixed. However, each room will have a number of camera points, and the camera switching will be based on a proprietary AI algorithm that the company hopes will create a truly cinematic experience for players, while enabling them to see exactly what is happening in each scene.

Even in early versions, TRI's experience with 3D graphics makes it obvious that *Nocturne* will look great. With several months to add the art assets and tweak the gameplay (and the important camera AI), it seems likely that the gameplay will match up as well.







The cameras are designed to create a cinematic view



Bodies crumple realistically in realtime (top). The dynamic camera adds to the action by putting players in unfamiliar situations (above)

FORMAT
PC

PUBLISHER
Gathering of Developers

DEVELOPER
Terminal Reality, Inc

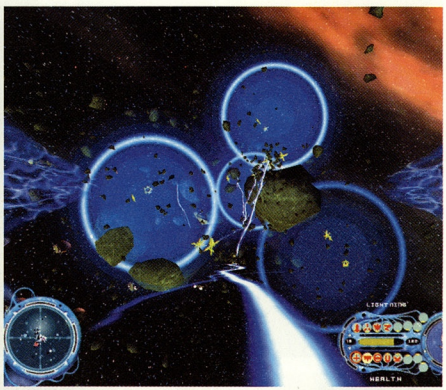
RELEASE DATE
Fall, 1999

ORIGIN
U.S.

SINISTAR UNLEASHED

A game originally intended to be a *Wing Commander*-style space opera gets a redesign and becomes a classic arcade update. Will this shooter be worthy of its namesake?









The payoff for destroying a Sinistar? One massive explosion, complete with multiple lighting and particle effects

Retrofitting may be the best word to describe what GameFX has done with *Out of the Void*, the name *Sinistar Unleashed* was called when we originally previewed it 20 issues ago in **NG 31**. Since then, GameFX scrapped its original plans for a massive space odyssey in favor of a fast-and-simple 3D shooter. And when the company obtained the license to *Sinistar*, re-tailoring the former *Out of the Void*'s gameplay to the frantic stylings of the classic Williams arcade title seemed like a natural fit.

When first previewed in these pages, *Out of the Void* was technically superb — it was the first truly native 3Dfx game the **NG** staff had seen. And despite the year and a half of catch-up time GameFX has given the rest of the industry, the effects have taken on more polish and the game retains some brilliant spacescapes that may still go unrivaled when it finally does come to market.

But the gameplay will, according to the team at GameFX, parallel the design of the original *Sinistar*. Players still have to shoot asteroids that hold the crystals necessary to make Sinibombs. As the player mines the crystals, alien grunts will still attack the player's ship. And the ultimate goal remains the same: To make enough Sinibombs to destroy the Sinistar, the Deathstar-like boss on every level which eventually hatches and hunts the player.

"The original *Sinistar* was kind of an obscure game," admits Mark Tsai, Senior Producer for GameFX. "But our *Sinistar* isn't just a remake," Tsai quickly points out, "It's really an extension, there's a lot more going on."

"Instead of just the one weapon and missiles," says GameFX Designer Walter





GameFX admirably passes the "lightning gun test" now a prerequisite effect in any accelerated game

FORMAT
PC

PUBLISHER
THQ

DEVELOPER
GameFX

RELEASE DATE
Summer '99

ORIGIN
U.S.











Close combat dogfights and a translucent cockpit view enable players to get in tight and get a good look at the detailed enemy ships



Wright, "In addition to your basic weapon, we've got at least eight different weapons you can select from, . Plus some specials, like mines and bombs."

A weaponry demo calls up some solid effects, including a powerful lightning gun that chains to other enemy ships. Players will also be able to collect a variety of crystals, each valuable in its own way. And of course, there will be greater variety in the enemies.

"In the original game there was one *Sinistar* on each level," Wright says, "the same boss. We decided from the beginning that we wanted you to meet different creatures as you went through the game."

And the crop of creatures is fairly impressive. The current plan calls for the game to span 24 levels, where every three standard levels are followed by a bonus level. The first 12 levels features an insectlike race of enemies, while the second 12 take place in a darker universe, what Wright calls "the distilled evil universe," where the Sinistar bosses are spawned. Players will pilot six ships over the course of the game; each similar in design but a bit more evolved than its predecessor. Of course, as the danger level ramps up, players will gain access to new ships. And will any of them look like the ship from the original *Sinistar*?

"No." Was Wright's surprising answer. "Rather than trying to take *Sinistar* and put it into 3D," he explains, "we tried to develop the idea of the original *Sinistar* as a contemporary one, given the tools we've got."

While GameFX should be commended for expanding the *Sinistar*



If this spaceship looks familiar, it is because it is the same one the company designed for *Out of the Void*, first seen in NG 31

ORIGINAL SIN

Noah Falstein created the original arcade *Sinistar* for Williams in 1982. While it's believed that Falstein is still active in game development, he is not involved with this update. *Sinistar* was one of the first games to feature stereo sound, synthesized voice samples, and a 49-position optical joystick. The game can be found on Williams Arcade Classics Volume One.





Shooting asteroids released crystals needed for Sinibombs

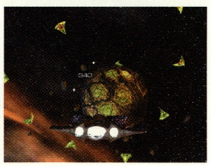




Sinibombs were needed to destroy the Sinistar, which ferociously hunted players







While these screens depict single player action, up to 16 pilots can dogfight in multiplayer deathmatches





Seemingly endless fields of asteroids, large ships, and even larger planets bring an amazing sense of scale to the *Sinistar* universe

universe, it seems rash that they've dismissed all of the visual inspiration of the original. Activision's *Battlezone* remake, which was a radical departure in gameplay, brought fantastic, yet familiar ship designs to the battlefield. As GameFX's ship is exactly the same as it was when the game was called *Out of The Void*, **Next Generation** can't help but to point out to its readers that the team still seems somewhat attached to the former project.

As THQ has surely paid Midway a fair amount of money for use of the *Sinistar* name, it would make sense for GameFX to get off their assets and rework some of the art to capitalize on the new franchise. The ink was just drying on the licensing deal when **Next Generation** visited GameFX, so there's hope that some of this kind of work will happen. If not, the developer risks alienating those veterans among us who remember the original's throaty synthesized cry, "Run, coward!"

These observations aside, the team is closing in on solid arcade gameplay and controls that may have some players letting go of the mouse and dusting off the flightstick. THQ purchased GameFX in late '98 and this title is the publisher's first internally developed PC title. While *Sinistar Unleashed* might not be perfect when it goes out the door, we assure you it will be a heck of a lot better than most of those wrestling games THQ keeps sending us, and that's a good start. NG

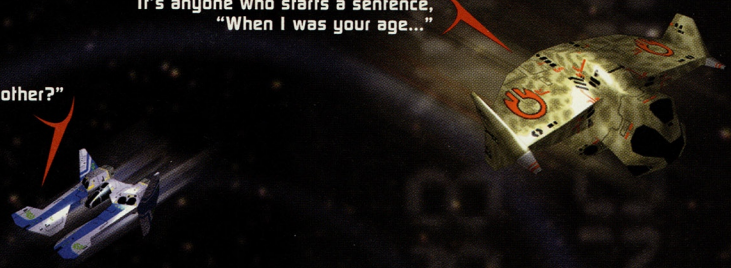




The game requires 3D acceleration, and the developer is recommending a P233

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"Why couldn't you be more like your brother?"



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It's all the girls who ever
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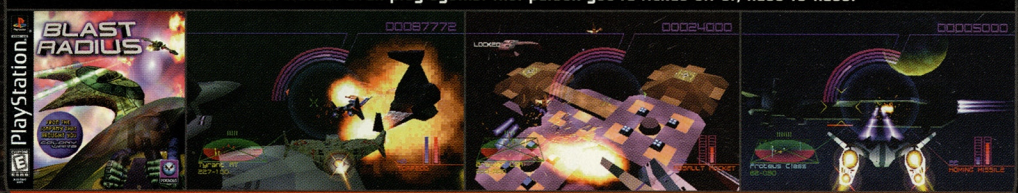


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KINGPIN

Veteran developers Xatrix take a walk on the wild side





Death comes fast and often in *Kingpin*. The flame-thrower is particularly cruel

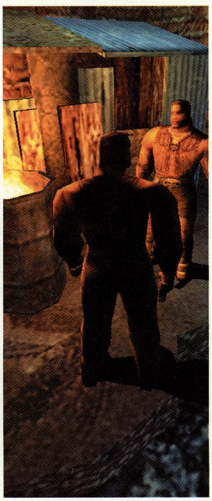
The scene opens with an overcast night and dimly lit alleys. Here and there shadowy figures warm themselves on the heat from trash can fires. You can hear them muttering as you approach, their voices mingling with the sound of distant police sirens. You pass the figures and walk on, your footsteps echo off the high brick walls of the warehouses that line the dark corridor. You see a couple kissing behind a fence. They see you approach. The man comes toward you. "You better step the fuck off!" He shouts. You can hear the background music intensifying. You draw the lead pipe from beneath your coat and smash in the side of his face, which promptly turns to mush. "You're gonna fuckin' die!" he screams, and comes back at you. Seconds later, the couple lie dead on the concrete in a pool of blood. The music is pumping, your blood is up. The sirens get louder.

This is not your average first-person shooter. It's also not what you would expect to see next from Xatrix, the creators of the tongue-in-cheek *Redneck Rampage*. Headed by veteran developer Drew Markham, the Santa Monica–based codeshop is justifiably proud of *Kingpin*, which features a powerful mix of technical innovation and gutsy design.

Essentially a level-based, linear challenge set in the darkest corners of the inner city, the game drops you into the underworld where you must gather followers, money, and information in your quest to usurp the Kingpin, a crime lord whose gangs rule the warehouses, alleys, and rundown tenements of his turf. It's a setting that begs for a level of realism uncommon in this genre — not to mention in the studios of Xatrix. Enabling that realism is a modified







Not all encounters have a violent ending (it is possible to just talk to NPCs), but most do



FORMAT
PC

PUBLISHER
Interplay

DEVELOPER
Xatrix

RELEASE DATE
Spring '99

ORIGIN
U.S.







***Boyz N the Hood* meets *Quake*? Urban decay provides the backdrop**

version of Id Software's *Quake 2* engine and a highly effective use of sound.

"Using the *Quake 2* engine gave us a head start and allowed us to concentrate on the important stuff," Markham reveals. "But we didn't just take the engine and leave it at that, we 'Unrealized' it — added procedural smoke and fire and lens flare, that kind of thing. Those are all things you're obliged to do now."

The result is a world that leaves nothing to the imagination. The darkened alleys harbor the homeless, the tenement buildings have been painstakingly constructed with every conceivable detail from the obvious (apartments with everything from a TV to a toaster) to the unsavory (the urine-stained bathrooms and backed-up toilets).

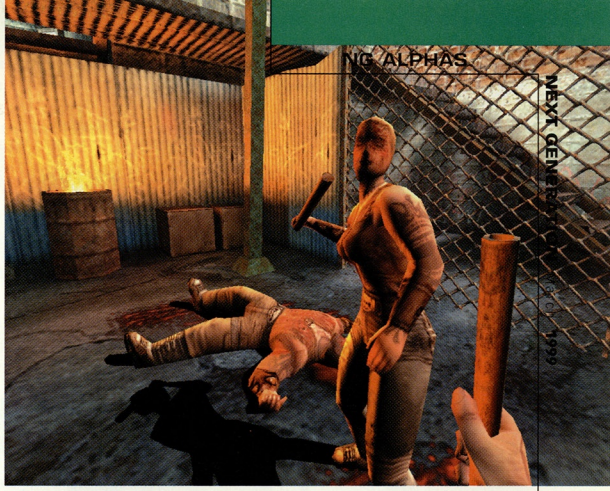
Xatrix's commitment to realism extends as much to the inhabitants as to the environment. The character models are extremely detailed, and in another addition to the *Quake* engine, the texture-maps on the models reflect damage instantly and permanently. It's a somewhat ghoulish, but highly effective, touch.

Combat, too, is a departure from the norm. As well as having access to a variety of projectile weapons (which must be purchased or otherwise acquired — you won't just find them laying around), players can get up close and personal with crowbars, motorcycle chains, baseball bats, and lead pipes. Judging by the poor feel and control exhibited by hand-to-hand weapons in other first-person titles, you'd be forgiven for dreading use of such weaponry, but in *Kingpin* it works. Collision is correctly calculated, and every blow is accompanied by a satisfying crunch.

This "crunch" is where Xatrix has perhaps made the most progress. Markham and his team have a added a simple, but effective, sound feature. "It's surface detection," he explains. "Every object in the game has a material definition to it: Wherever you see metal, you hear metal when you touch it or when you walk on it. Each surface has its own resonant value that modifies the sounds of ricochet bullets, footsteps, or debris accordingly. If you're in an alley, you'll hear an echo when you walk, and the sound of your footsteps will be correct."

This "correct" sound is another extremely effective ploy to once more draw you into the world. And it's not just sound effects that are put to good use, speech also plays an important role. On one level, it adds to the atmosphere with gutter-mouthed gangsters facing off against one another. But on another level, it forms a vital part of gameplay. As you approach another character, you can select an attitude that ranges from hostile to friendly, and this attitude determines the reaction of the NPCs. About half the inhabitants of *Kingpin* are neutral, and many can be persuaded to help you, if approached correctly.

With *Half-Life* redefining the genre, it may seem that *Kingpin*'s accent on violence is something of a throwback. But such a judgement misses the point. Xatrix is attempting to provide a world rich with detail and realism with enough nuances to elevate it well above the *Quake* clones. Clever scripting (courtesy of a world clock that triggers key events) and a living, breathing environment should make for an arresting, powerful, and above all, utterly believable experience. NG





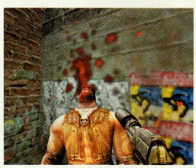
***Kingpin*'s violent subject matter is certain to draw criticism, but Xatrix contend that it's no more than is needed to provide a realistic game**





All the environments (however elaborate) are as realistic and detailed as possible





Thanks to a modified *Quake 2* engine, *Kingpin* is a long way from *Redneck Rampage*

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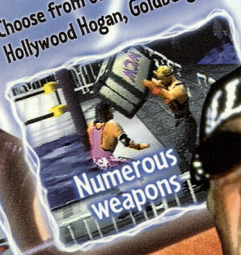
PlayStation

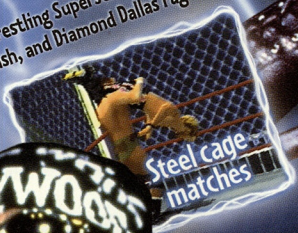
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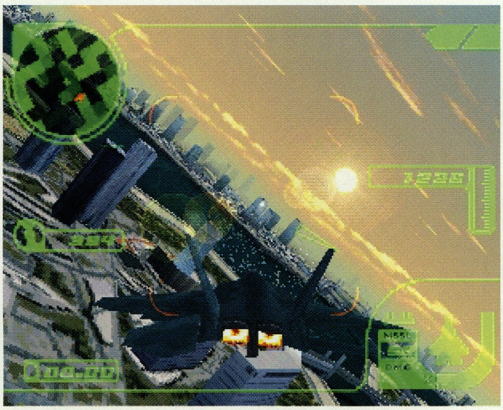
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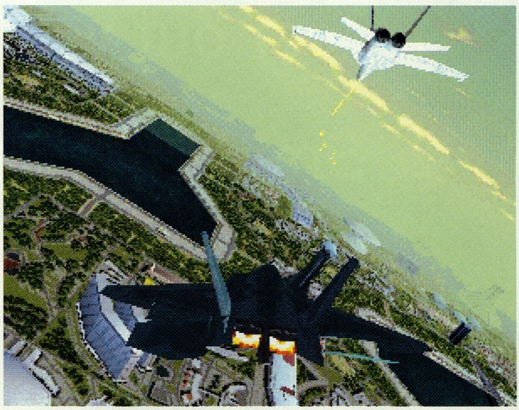
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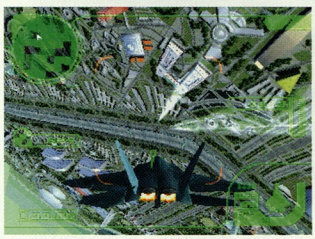
ACE COMBAT 3

Will Namco finally get it perfect the third time around?



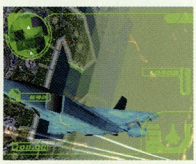


Although the terrain remains predominantly a scaled bitmap, the scenery is punctuated by polygonal skyscrapers that are fantastic to negotiate at high speed





This could be the first console-based flight sim to offer intelligent play and stylish dogfights





NG hopes that the final version will see you actually flying under the bridge, leaving a wake in the river

Namco's *Ace Combat 1* and *2* supplied firm support for the premise that the arcade-style flight sim has progressed little since Sega's glamorous but shallow *Afterburner*.

By offering uncomplicated physics models, almost arbitrary "waves" of enemy craft, and a fine line in "fire and forget," Namco's *Ace Combat*s failed to re-create the sense of immersion and intensity that epitomizes the best PC flight sims, yet they offered little in the way of a quick, accessible blast to ameliorate that loss. *Ace Combat 3* must therefore work hard to attract gamers who are intrigued by the prospect of simple plane-to-plane dogfights, yet disappointed by the failures that have marred this sub-genre.

Namco aims to improve the aesthetic appeal of this third *Ace Combat* but, unusually, the Japanese publisher has based *Ace Combat 3*'s action in the "near" future. While the familiar planes and weaponry are available, a selection of Namco-designed aircraft occupy starring roles.

Namco is keen to stress that *Ace Combat 3*'s dogfights are more involved than the often lightweight exchanges of its predecessors. Rather than firing from a distance with relative impunity, players will have to tackle the enemy and their improved AI with skill and forethought. The ability to pinpoint a distant cluster of pixels is (in principle) no longer the fast route to success.

That *Ace Combat 3* features Dual Shock compatibility will come as no surprise, but the promise of an analog control system is interesting. Imagine, for example, the ability to use a cockpit-based view, with one stick controlling craft movement and the other altering the viewpoint.

Combine this feature with intelligent, persistent rival pilots who attempt to gun you down from behind, and the potential for tense, atmospheric dogfights is huge. Alas, Namco is jealously guarding the 50% complete version of *AC3*, so there are few firm gameplay details available.

The hardcore flight sim, a cherished staple of the stereotypical PC owner's software collection, has little to offer console owners. Can a stylized, simplified dogfight sim succeed where its more complex cousin would fail? NG





Ace Combat 3*'s visuals show a marked increase in quality over *Ace Combat 2

FORMAT
PlayStation

PUBLISHER
Namco

DEVELOPER
Namco

RELEASE DATE
TBA

ORIGIN
Japan

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STAR IXIOM

Namco's latest sci-fi shooter promises more than a boost in graphics

With a catalog featuring such highlights as *Xevious*, *Galaga,* and *Starblade*, Namco requires little introduction as a proponent of the space shoot-'em-up genre. Yet *Star Ixiom* is a progression for the the company, addressing criticisms of *Starblade*'s simplistic, linear structure by establishing a framework of mission-based objectives that give the game a strategic depth unusual for a console game.

Like stablemate *Libero Grande*, *Star Ixiom* splits its play into two distinct sections. Players deal with their administrative tasks in Map mode, while the self-explanatory Combat mode sees them fly actual missions. Naturally, there's a symbiotic relationship between the two. In Map mode, for example, it is possible to establish attack routes and supply lines. Should players neglect this duty, or perform it badly, it becomes more difficult to achieve their targets in Combat mode.

There are many parallels between *Star Ixiom* and Microprose's *X-Com Interceptor* (including, unfortunately a continuation of the hackneyed "alien oppressors" narrative theme). However, Japanese interpretations of a design brief or genre tend to differ from those of their Western coding brothers. One example of this is *Star Ixiom*'s three play modes. Practice mode, obviously, provides a training ground for the novice, offering a gentle, informative introduction to its dual play styles, while Conquest mode (like *X-Com Interceptor*) offers a full-scale, non-linear campaign. But there's also a simplified Conquest mode, where play is conducted on a more approachable and immediately gratifying mission-by-mission basis.

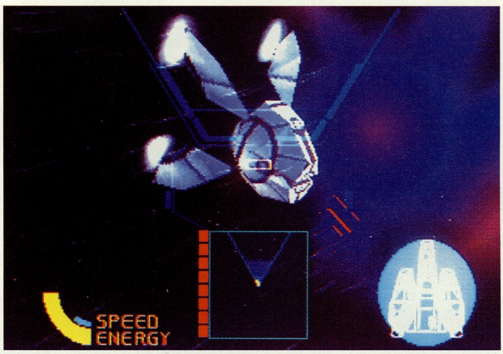
With progressively more powerful equipment up for grabs, and a variety of FMV sequences moving the plot along, *Star Ixiom*'s debt of gratitude to its Western cousins is obvious. In offering a more cerebral brand of play, though, it distinguishes itself as a relatively innovative PlayStation release. **NG** is curious to see how the Japanese market reacts to a title with such obvious PC-style overtones. NG







Star Ixiom*'s strategic framework cribs from *X-Com*, and the "Geo-sword" ship returns from *Starblade

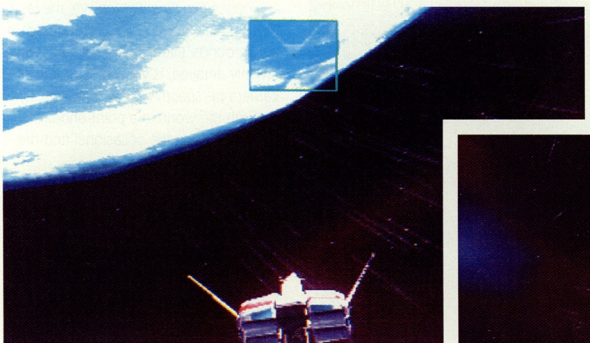


Namco's artists have opted for a simple, colorful look. The ship designs and cockpit interface maintain the feel of the *Starblade* series

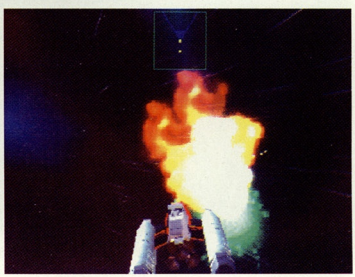




A Namco trademark (top) translucent weapon trails



Space sections offer a convincing illusion of speed and scale, as well as the requisite colorful explosions



FORMAT
PlayStation

PUBLISHER
Namco

DEVELOPER
Namco

RELEASE DATE
TBA

ORIGIN
Japan

SILVER

Already three years in development, will Ocean's action RPG prove a worthy investment?







Besides this ornery green dragon, the open pits in the floor may pose a problem for players

Take a quick look at *Silver*, and you'll see polygon-modeled, anime-inspired characters engaging in realtime combat against a backdrop of sharp, prerendered fantasy settings. Sounds like a console game, doesn't it? But this game, which certainly draws some inspiration from Square's *Final Fantasy* series, is for the PC.

Set in the fantasy world of Jarrah, *Silver* combines RPG elements with mouse-controlled realtime combat. Players assume the role of David, who must rescue his wife from the title character, *Silver*, a corrupt ruler who has made a pact with an evil god — you can figure out the rest. Throughout the course of the game, players will acquire five other party members and will have to collect eight magical orbs in order to gain enough power to confront Silver.

Much like *Final Fantasy VII*, the land of Jarrah is composed of prerendered backgrounds. Every scene (all 270), while lavishly detailed, is viewed from a fixed-camera perspective. Players move through the world in a point-and-click fashion, solving the occasional find-the-item/open-the-door puzzle.

But during combat, players control their attacks in what can best be described as a simplified version of the mouse-driven attacks from *Die By the Sword*: the weapon moves correspond to how the player moves his mouse. There are both melee and long-range weapons, 16 in total, that run the gamut from swords and daggers to axes and catapults. The enemies are also diverse,



Projectile weapons can be used to attack enemies from safe distances





FORMAT
PC

PUBLISHER
Infogrames

DEVELOPER
Infogrames UK

RELEASE DATE
May 1999

ORIGIN
UK



Venture into this outlandish swamp and you can guarantee a visit from the freaks



Characters with oversized weapons and spiky hair cuts certainly lend credence to comparisons with the *Final Fantasy* series

from fairly insignificant imps to intimidating bosses such as an ice dragon and a giant rat god.

Silver's compelling

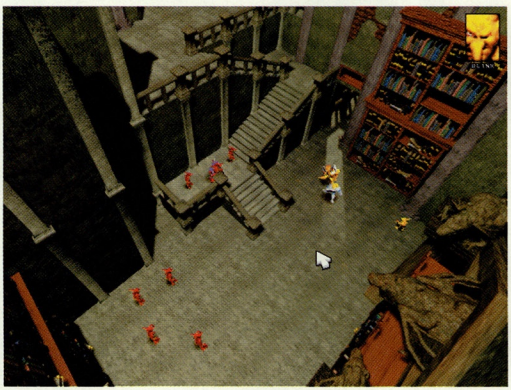
story is well woven into the gameplay, setting up action sequences and keeping the player moving toward their next objective. The dialogue throughout the game is extensive — approximately 50,000 words. While it can be viewed as text captions, the voice acting is quite good and includes *Dr. Who*'s Tom Baker. While the fiction is by no means Pulitzer quality, it is better-crafted than most, and it's a far cry from the hokey translations of Japanese RPGs. Notably, a full-time scriptwriter is part of the development team.

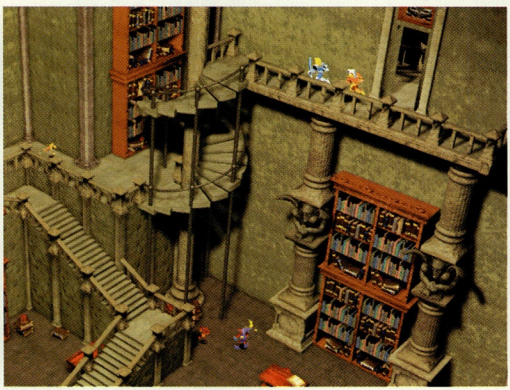
Silver is impressive in scope, but after three years in development, its roots in older technology are beginning to show, especially in the game's fixed cameras, fairly low-poly models, and lack of realtime environmental lighting. Considering the style of the game, **Next Generation** has to wonder why *Silver* wasn't developed for the console. The mouse-driven, realtime fighting is something easily converted to a control pad, and the story is something the console audience would eat up. However it's worth noting that the turn-based, PC RPG crowd warmed to a similar, yet cruder mechanic for *Diablo*.

In the end, when *Silver* ships, hardcore PC RPG players may not find the game as adult (read: dark and Tolkien-esque) as other games in this genre. But hopefully, most will find the blend of action, RPG, and interesting story elements enriching enough to warrant a look. We did. NG



Players learn magic throughout the game, but once they have collected all eight orbs, there are roughly 40 spells at their disposal





The *Silver* team has proved it can create impressive architecture, as seen in this ornate, and labyrinthine library

Huge Air + Phat Moves + Sick Tricks



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Launches April

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PlayStation

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MILESTONES

Next Generation's monthly update on tomorrow's games

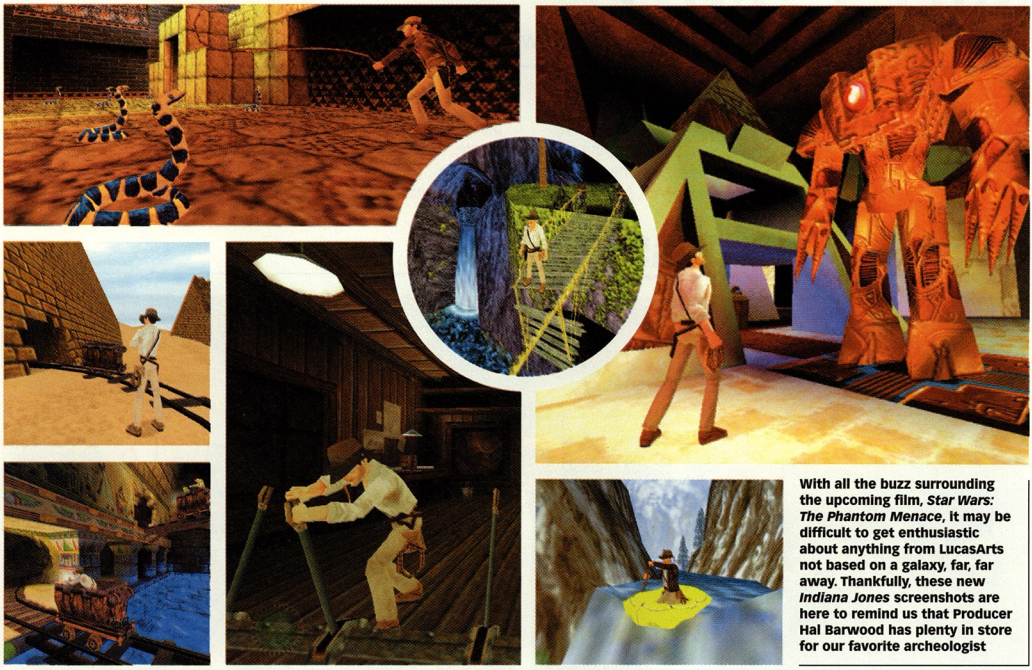
It takes dedication to make a good game, but it takes innovation to make a great game. Whatever the outcome, all games, even the lousy ones, take time to create. So think about some of those rushed, unbalanced products you saw over the holiday season, and be thankful that some of the following titles, specifically *Ultima Ascension*, have yet to hit store shelves

ULTIMA ASCENSION PC



Since it graced our cover a year ago (NG 39), we've been waiting to get our hands on the ninth installment of Richard Garriott's epic RPG. The release has been pushed back to the second quarter of this year to insure this first 3D *Ultima* is still very much *Ultima*, and not *Tomb Raider*

INDIANA JONES AND THE INFERNAL MACHINE PC



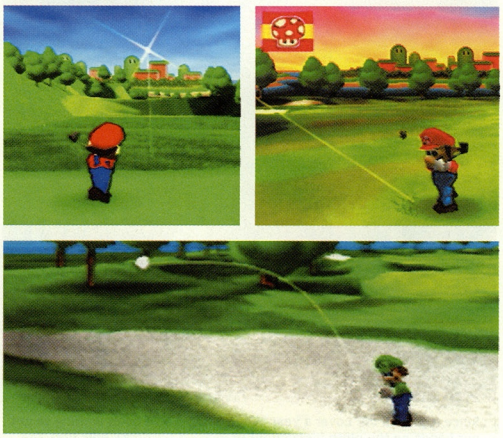
With all the buzz surrounding the upcoming film, ***Star Wars: The Phantom Menace***, it may be difficult to get enthusiastic about anything from LucasArts not based on a galaxy, far, far away. Thankfully, these new ***Indiana Jones*** screenshots are here to remind us that Producer Hal Barwood has plenty in store for our favorite archeologist

VAMPIRE: THE MASQUERADE PC



Due this fall from start-up Nihilistic software, the staff on this action-RPG has worked on ***Dark Forces***, ***Jedi Knight***, ***Decent***, and ***Descent II***

MARIO GOLF Nintendo 64



After years of saving the princess, Mario relaxes a bit on the fairways in this simple, arcade-style game not unlike Sony's ***Hot Shots Golf***

NBA IN THE ZONE '99



The real NBA season has finally started, and this long-running PSX series looks better after a less-than-stunning '98 version

EARTH 2150



Europe's Topware believes it may have a PC hit this year with this futuristic, fully scalable, 3D, realtime strategy game. We'll see

SAMURAI LEGEND PlayStation







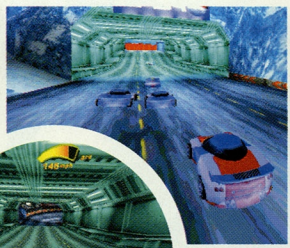




Tentative titles for this game have also included *Shogun Assassin* and *Japan*. Whatever Konami calls it, it's *Resident Evil* with swords

JEFF GORDON XS RACING PC





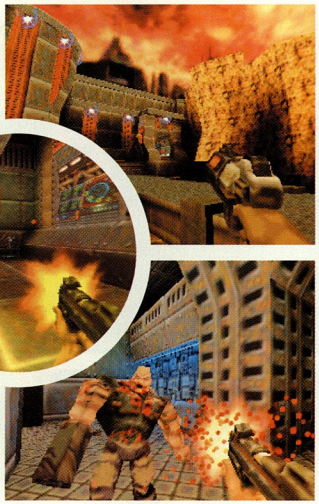


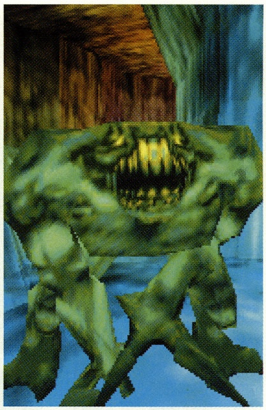


While the PlayStation version of Jeff Gordon's game is all but complete, this PC version, also from Chicago-based Real Sports, is progressing nicely. The lighting models on the cars are particularly well done, and the gameplay already delivers a fantastic sense of speed

QUAKE II Nintendo 64







This is obviously *Quake II*. What isn't obvious is that it's the N64 version. Most impressive, and four-player as well

JACK NICKLAUS GOLF



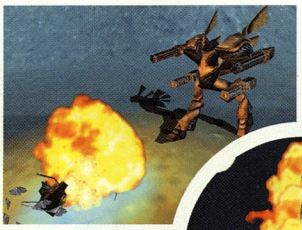
Long part of Accolade, Jack joins Activision for the first time in a six-game series. Now you can play as the Bear himself

FISHERMAN'S BAIT



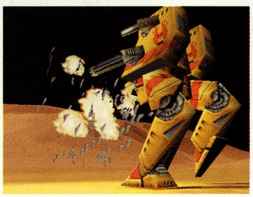
Ported from the arcade to the PlayStation, Konami's pick-up-and-play Bass fishing game may be a catch for virtual anglers

STARSIEGE PC



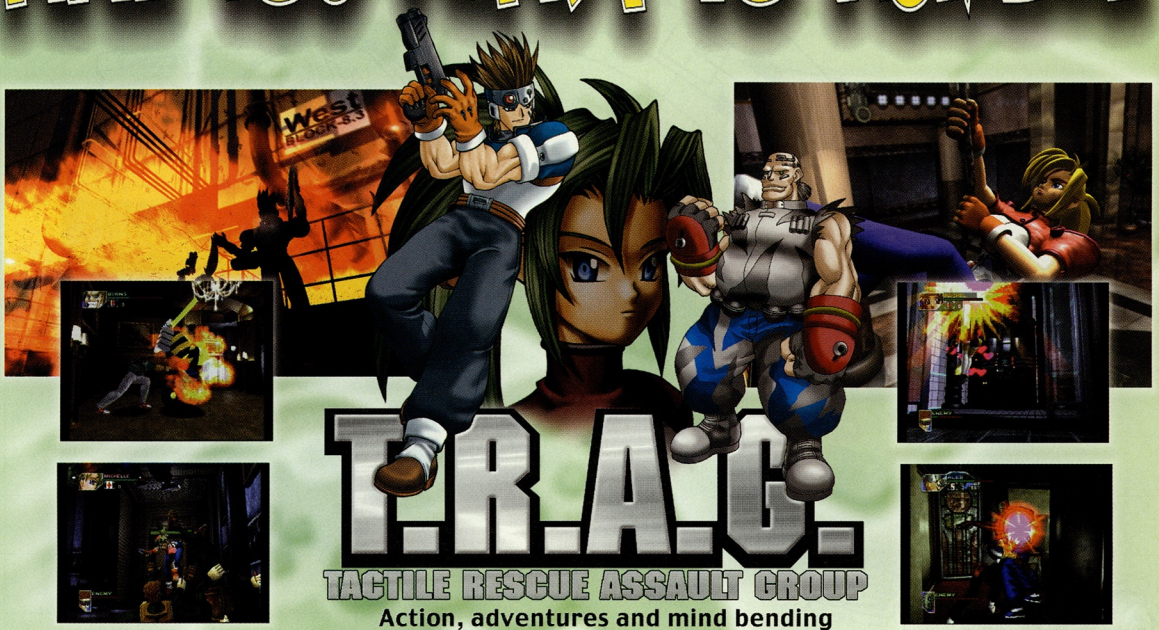






From Sierra's Dynamix studio, *Starsiege* should offer some variety to the field of otherwise standard *Mechwarrior*-style games. Players choose from 30 vehicles, including airskimmers, tanks, and "Hercs" as they're known here. All are customizable down to the paint job. And longevity? There are more than 45 single-player missions

ARE YOU READY TO RUMBLE



T.R.A.C.

TACTILE RESCUE ASSAULT GROUP

Action, adventures and mind bending mysteries await your main characters at every turn. Are you brave enough to join the chase?

Coming in March '99

SUNSOFT

PlayStation



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NINTENDO64

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NINTENDO64

ELECTRO BRAIN

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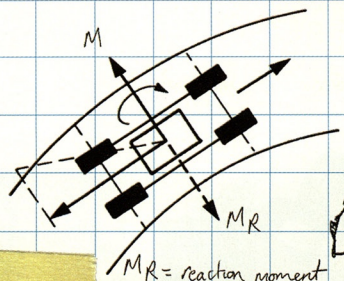
Visit the monster hatchery and create outrageous cyber beings in this amazing RPG adventure of wit and will.

Coming in March '99

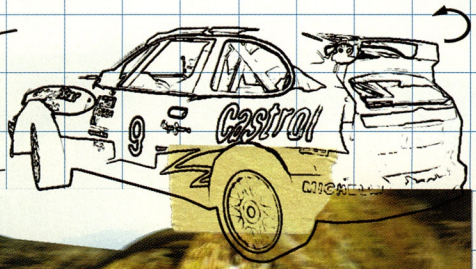
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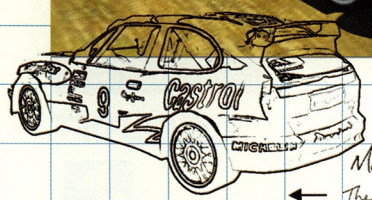


M_R = reaction moment









Motion

← The pressure is increased at the rear of the car and decreased at the front

Equilibrium

At what speed can a car travel round a corner radius of 40m if the distance between its back wheels is 1.60m and the centre of gravity is 0.70m from the ground?

The car is just able to take the corner then the wheels are just about to leave the ground. At this point $S = W$

$S \times 0.80\,m = F \times 0.70\,m$

$F = \frac{0.80\,S}{0.70} = \frac{0.80}{0.70} \times W = \frac{8.0}{7.0} \times mg$

since $W = mg$

where m is the mass of the car and g is the acceleration due to gravity.

so $F = \frac{8.0 \times 9.8 \times m}{7.0}$

If the car is travelling at speed V and the radius of curvature is 40m its centripetal acceleration is

$\frac{V^2}{r} = \frac{V^2}{40}$

This acceleration is caused by the friction force F so since force = mass × acceleration

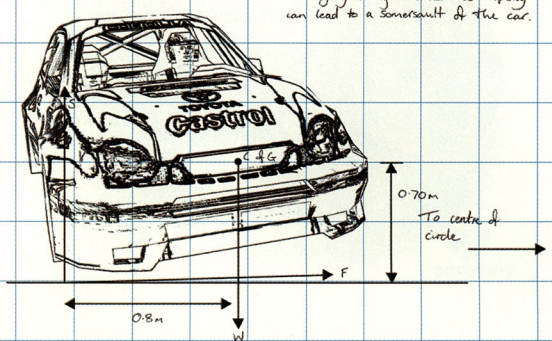
$F = m \times \frac{V^2}{40}$

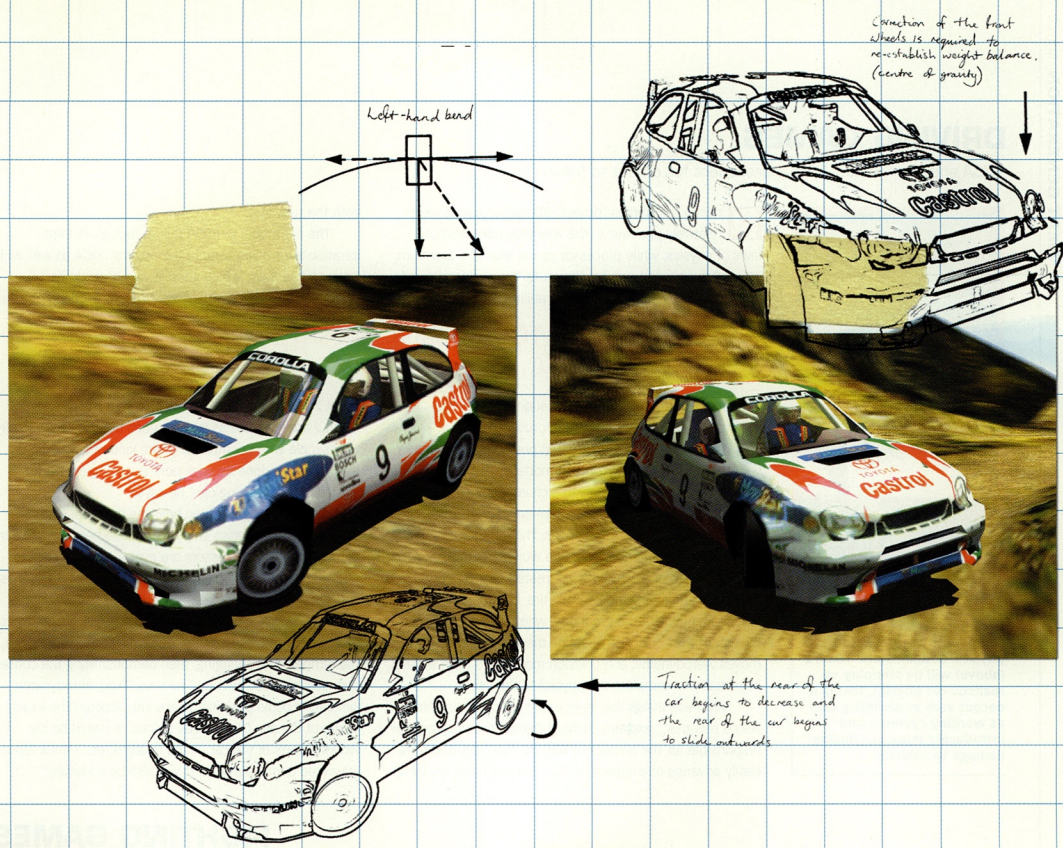
$11.2m = m \times \frac{V^2}{40}$

$11.2 \times 40 = V^2$

$V = \sqrt{11.2 \times 40} = 21\ ms^{-1}$

This also shows why it is that in rallying taking a corner too rapidly can lead to a somersault of the car.





Physics Matters

In-game physics is the driving force behind the new wave of science-led gaming. Next Generation explores this trend and considers the role more advanced physics will play in the future

Thanks to gravity, falling objects accelerate towards the ground at a rate of 9.8 meters per second per second. A cubic meter of water weighs exactly one metric ton, and freezes at zero degrees Celsius. The fastest tornado winds blow at 318mph, which is almost half the speed of sound. And a shot of Jack Daniels contains 40% pure alcohol. Some things in life, at least, never change.

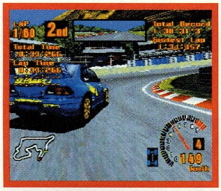
In game worlds, however, you can't always rely on the laws of physics to apply. It can be frustrating when games break the rules. Take, for instance, the goalkeepers in soccer games. They have an uncanny ability to teleport their onscreen bodies into the path of the ball, and in some cases they seem to exert a magnetic force over the ball so that it's sucked into their hands just when you thought a top-corner goal was certain. Or, when playing a fighting game, how annoying is it to incur the same amount of damage when you get kicked in the shin as when you receive a shattering roundhouse to the head?

Fortunately, technologies are being developed that will one day do away with such anomalies. The increased processor power that has improved graphics and audio so much over the last year is also on hand to revolutionize the physical realism of game worlds. Accurate physics modeling is becoming the order of the day for many developers. Games such as *GoldenEye* look and sound "real," but soon they should begin to feel real, something *Gran Turismo* almost achieves, and although game world physics are still pretty rudimentary, **Next Generation** expects to see the next great leap forward in game programming being made in this area soon.

In the next pages **NG** visits each gaming genre, and talks with the individuals responsible for the development of in-game physics to discover how realistic physics are being implemented in games.

DRIVING GAMES

TOCA and *Gran Turismo* set a precedent for others to follow





***Gran Turismo* (top) combined excellent gameplay and competently represented physics. Codemasters' *TOCA 2* (above) will be stepping up realistic car physics, taking a decent stab at modeling cars as working systems, and introducing more convincing damage to vehicles**

Prior to the shift to "proper" 3D, racing games were relatively primitive in the way they portrayed the laws of physics; while processor power was at a premium, 2D worlds provided simpler shortcuts. The proliferation of high-end PCs, Dreamcast, and the ability of programmers to squeeze more out of the PlayStation and N64 has meant that physics engines are improving rapidly.

***The car model in* TOCA 2 *is in its third iteration after being used in the original* TOCA, *as well as in* Colin McRae Rally**

Where cars were once treated pretty much as blocks with wheels, it's now possible to model an automobile as a working system. It can be given a chassis and suspension system and the joints in this system can have subtle effects on the way the car handles. Though the car's actual motor isn't a simulated model of a working combustion engine, in games like *TOCA 2* it's treated as a separate force that feeds the wheels. Each tire, in turn, interacts independently with the ground — whether it's grass or pavement, wet or dry — affecting the way the vehicle moves. Aerodynamic and collision models are each applied individually to complete the physics of the car.

"All these things are dealt with separately and then linked together," explains Richard Ogden, the programmer responsible for the physics in *TOCA 2*. "We can therefore easily advance one aspect of the model without messing with the rest of it."

The car model in *TOCA 2* is, in fact, in its third iteration after being used in the original *TOCA* as well as in *Colin McRae Rally*, which goes to demonstrate its versatility. But Ogden does admit that, as cutting-edge as *TOCA 2* is, there's still a long way to go. "The physics in *TOCA 2* are accurate as far as it goes but they are actually very simple when compared to the kind of calculations that would be done by engineers analyzing the performance of a real racing car," he says.

Not surprisingly, Ogden believes that subsequent generations of graphics chips will enable better physics in games. Graphics processors are eventually expected to take charge of transformation (recalculation of 3D scenes) and lighting, leaving more CPU resources free to handle the physics. "We'll be able to do more detail in tire physics — actually having the rubber deforming and wearing out, the temperature changing, then demonstrating the consequences [of those effects]," he says. "Also, aerodynamic simulation could potentially take into account the exact shape of the car. Other areas to look at would be the working parts of the car — the gearbox, etc. I think more advanced damage modeling will also be a feature."

FIGHTING GAMES

As genre leaders, *Tekken* and *Virtua Fighter* redefine realism with every new iteration

The *Tekken* and *Virtua Fighter* series have both been responsible for increasing the level of realism in fighting games, principally for their introduction of true 3D fighting planes to the genre. *Tekken 3* on the PlayStation and *Virtua Fighter 3* in the arcade have also gone a long way toward achieving the sense of physical realism that is absolutely necessary to the genre. Still, it's argued that there's a lack of weight and inertia in such games. In general, contemporary fighting games rely on motion capture animations for their realism, rather than models of the human body with bone, muscle, and joints subjected to attributes such as its own mass, suppleness, and center of gravity.

"The big problem with motion capture is that it's not about programming dynamics and physics," says System 3's Mark Cale, "it's more about replaying an animated sequence. You could think of it as prestored physics, not true real-world physics."

System 3, whose fighting credentials go back as far as *International Karate* on the Commodore 64, is currently working on a new fighting game targeted at the next generation of consoles. The as-yet-untitled project is focused on creating realistic reactions to animated action, basing this action on limb kinetics and their true-life representation in a computer game. "This is almost impossible through the use of motion capture and can only be achieved by driving the dynamics of the game through a proper physics engine," adds Cale.

The System 3 team is working toward making damage context sensitive. In most games, the damage inflicted depends on the move rather than where the opponent is hit. So players can feel frustrated when they lose bouts thanks to footsweeps rather than decent blows. Cale suggests that players should be able to choose the damage system they prefer: one based on the move executed, or a new one based on the importance of the target.

"Having good physics is important,* and represents the future in every genre of *realtime 3D games,"

— Mark Cale

Though many developers are reticent when it comes to broaching the issue, often arguing that falsified physics make for better gameplay, System 3 is wholeheartedly embracing the concept. "Having good physics is important and represents the future in every genre of realtime 3D games, whether it is in driving, fighting, or first-person perspective," He states. "Simply put, it's how objects and people react in the real world and it should be the Holy Grail of all developers to try and simulate that realism."





A kick to the head in *Tekken 3* (top) calls up the right animation in response, but is it physically accurate?

Many think *Virtua Fighter 3* (above) is more correct, but there is still much work to be done

PLATFORM GAMES

Platformers might be firmly rooted in fantasy, but there's always room for realism

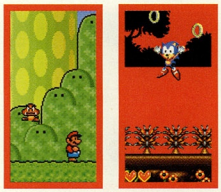
The concept of realistic physics is relatively alien to the platform genre. In fact, you can almost see fans of platformers boycotting those games that do feature realistic physics. After all, how much fun would Sonic be if his body was modeled after a real hedgehog? Indeed, how fun would Mario be if his was modeled after an actual Italian plumber? More seriously, what would platformers be like if unlikely leaps of faith could not be made, if springs couldn't propel game characters five times as far as they would in the real world, or if small birds weren't able to carry characters 76 times their size across chasms filled with fire-breathing salamanders?

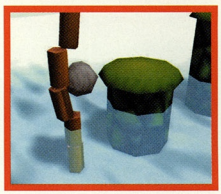
But as Argonaut's Jez San argues, this doesn't mean realistic physics engines can't be used to advance platform games. "In the past, platform games needed to have special case code written to handle each possible interaction that the player may have wanted to have with each object in the game world," he explains. "It doesn't mean it can't be physically accurate if done this way, but it's more elegant and intuitive for both the gamer and the development team if there is a more advanced engine that can handle a higher level of physics and collision simulation."

San sites the case of floating platforms: In a simple game like *Frogger*, stepping onto a log would have no effect on its buoyancy. With a more advanced engine, the platform might bob unevenly where the character is standing and one end of it may bob out of the water. If the character is carrying something heavy this may result in the platform, or part of it, sinking below the waterline. Yet as San points out, the realism can go still further with a more complete model, "In a generic physics model, the density of the object versus its mass would affect its buoyancy. If you dropped it from a height, it would sink a little and then bob up, possibly even springing out of the water."

You can almost see fans** of platformers boycotting those games that do feature **realistic physics

It's possible that such an engine could be written that deals with all sorts of objects and attributes factors to them such as density (affecting buoyancy), coefficients of friction (slipperiness) and coefficients of restitution (how bouncy they are). Once a physics model is in place that applies to the entire game world, it can be tweaked in different ways to create the sort of cartoon physics hitherto seen in platform games but which work together in a consistent and integrated system rather than being programmed on a piece-by-piece basis.





The physics in *Mario* (top left) and *Sonic* (top right) were preprogrammed on a situation-by-situation basis, whereas Argonaut's *Reeco* (above) uses a generalized physics engine that allows objects such as the rocks and logs to have real mass

FIRST-PERSON SHOOTERS

Benchmark titles such as *Quake* and *GoldenEye* partner great gameplay with realistic physics





3D Realms' *Max Payne* (top) will include accurately modeled projectile weapons, which means that bullets travel in realtime, while *Quake II*'s space level (above) demonstrates the amusing gameplay that can be found in low-gravity situations

The immediacy and and visual realism of the first-person perspective gives this gaming genre instant appeal. Players are also given a certain amount of scope to interact with the game world. In games like *Quake II* you can run up spiraling staircases, leap chasms, climb ladders, duck into sewer pipes, and leap from great heights into pools of water. *Unreal* and *Half-Life* even enable players to move crates around then climb on them to access new parts of the game and to destroy a number of items in the game world.

*As real as these games feel, **their programmers are having fun with real-world physics** rather than replicating them*

Yet, as real as these games feel, their programmers often take license with real-world physics rather than replicating it. Characters can, for instance, change direction in midair when jumping. Even the most capable gymnast knows that this defies Newton's laws. You can even combine a carefully timed jump with the force of a rocket explosion to execute the rocket jump — a maneuver certain to blow off your legs in the real world. In the meantime, take a look at the space base level in *Quake II* to see the effects of meddling with gravity.

As 3D Realms' Scott Miller points out, much of this deliberate rule-bending favors gameplay considerations, "The bottom line is that realistic physics do not always mean better gameplay. *Trespasser* is a perfect example of this."

However, this doesn't mean better physics can't be used to improve gameplay. There have been numerous patches released in the wake of *Quake II* devoted to tweaking things such as the way players found themselves stuck to the scenery, or sliding off things they bumped into in a curiously unnatural way. Furthermore, projectiles you're confident you've comfortably avoided occasionally still manage to hit you, which can prove horrendously infuriating.

Max Payne, a shoot-'em-up currently being developed by Miller's team at 3D Realms, is set to feature some breakthrough modeling of realistic weapons. "Bullets and projectiles actually travel at their correct speeds, rather than moving instantaneously as in previous games," says Miller. "This means that you'll need to lead opponents who are running at a distance. Bullets will also ricochet correctly and gravity will be a factor so that you will need to adjust your sniper scope for the proper range, otherwise you'll shoot too high or too low."

SPORTS GAMES

For the most part, playing football at premier level is only possible when physics is involved





***NHL '99* (top) makes good use of bodychecking and momentum across icy surfaces, but it also makes plenty of puck cheats. *World League Soccer '99* (above) uses motion-captured animations rather than a physics engine**

Due to their immediacy and competitive nature, sports games present environments where the implementation of realistic physics can prove crucial. It's while playing these games that players often feel the most cheated when the game world doesn't behave as it does when you play the particular sport in real life — and while it's hard to argue about whether or not the behavior of a spaceship is "realistic," anyone with a TV can easily judge the success (or failure) of sports games physics.

*Though programmers will continue to **cheat at sports physics for a while,** great improvements are expected*

In soccer or ice hockey games, for instance, control of the ball is often determined by the rather large collision-detection boxes created around the players. All gamers have been in situations where opposing game characters intercept the ball or puck when it actually appears to be quite far away from them, or, worse still, when they're not even facing the right direction to receive it. The collision detection in the game code seems to suck the ball into their control. Players can feel cheated, even though the same collision-detection rules apply to their team. Some developers are looking at specifying collision-detection zones for certain parts of a player's anatomy.

"At the moment, the physics aspect of sports games is in its infancy," says Silicon Dreams' Phil Drinkwater, developer of the *World League Soccer* games. "A soccer ball rolls and flies, but it may not curve due to its spin. The net moves when the ball hits it, but it may only be an animation or built from a simple function. Cornerflags move, but not really due to the amount of wind in the stadium. All of these issues will be addressed within the next few years, providing a more entertaining game world."

For Drinkwater, it will still be some time yet before players' movement is governed by a physics engine rather than an animation system. "A true physics engine that controlled player movement would be based on the forces applied to muscles and gravity on the joints. This is too complicated at the moment," he says.

In the meantime, programmers are more likely to turn to Inverse Kinematics, a simplified system governing limb and joint interaction. Though programmers will continue to use motion-capture animation and cheat at sports physics for a while, great improvements are expected. "The leap over the next few years should enhance gameplay dramatically, producing avenues gameplayers have been hoping for for many years," Drinkwater concludes.

ADVENTURE AND ROLE PLAYING GAMES

An advanced physics model could be more than just the icing on the cake

Because RPGs come from a turn-based background and adventure games focus on guiding players through a story, neither type of game has been a particularly relevant forum for the development of physics modeling. Their cerebral, fantastical nature usually means that interaction with characters and collecting magical items takes precedence over realistic movement or combat. Plus, with a emphasis on fantasy, physics aren't a critical issue. "You try modeling a stone-to-flesh spell in the real world," says Ade Carless, senior game producer at Gremlin. "Fossils don't grow on trees, you know!"

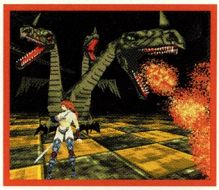
However, as with most other gaming genres, the advent of 3D and the move toward realtime worlds has given game designers new avenues to explore. Gamers are tired of the swing-for-swing animated swordfights of titles like *Deathtrap Dungeon*. Now players crave more satisfying swordplay and weapons systems, such as those offered by the flawed *Die by the Sword* or *Thief*.

Physics in RPGs and adventures can go much further than swords with realistic inertia. For Carless, currently working on the eagerly anticipated *Blade*, giving objects believable properties is one specific aim. "Previously, a thrown flask of oil might come to rest on hard flagstones without smashing. The crude physics model treated it the same as every other item," he says. "With a more sophisticated physics model, the flask of oil would break and spill its contents. A carelessly discarded torch would ignite the resulting slick."

Such implementations could enable players to kill or trap monsters. Carless is looking for other improvements, too. If wrecking balls and battering rams, as well as walls themselves, could be better simulated, we might see a new RPG sub-genre arise: Siege games.

*If **wrecking balls and battering rams** could be better simulated, we might see **a new RPG sub-genre arise: Siege games***

Blade itself will feature puzzles where real-world physics are critical. A pendulum-based example will see players firing arrows into a suspended bucket to get it swinging, so they can eventually grab hold of it and use the rope it hangs from to swing across a chasm. There will also be water-displacement puzzles. In combat, you'll be able to aim at various parts of a creature's anatomy, so you have a choice of killing or wounding it. The player can even chop off limbs and beat monsters with them. "By making the physics model resemble the real world more closely a player can assess his actions before carrying them out and can expect a far more convincing, and fair, outcome," concludes Carless.





The unwieldy swordplay in *Deathtrap Dungeon* (top) took away as much credibility from the game as the heroine's unlikely outfits. Gremlin's *Blade* (above) will base puzzles around its use of realistic physics

FLIGHT SIMULATORS

Realistic physics has more than a small part to play here

Flight sims are games where realism is valued probably more than in any other genre. Those who program them are always quick to point out how accurate they've made their jet fighters, helicopters, and missiles, and to the casual observer, titles from NovaLogic, DID, or EA do seem to model the physics of the real world very well indeed. Meanwhile, more than one reviewer has claimed, "The game makes you feel as though you're in the cockpit of a real F-16," without having any knowledge at all of what it's actually like to fly such a plane. It's therefore pretty difficult to verify the accuracy of the physics in any flight sim, particularly those of the supersonic variety.

Flight sim programmers currently attempt to model all the airborne effects you'd expect, such as lift, thrust, drag, gravity, and angle of attack, and where jet fighters are involved, Mach and G-forces, too. Planes and missiles themselves can be moved around in 3D according to relatively simple vector calculations. The complexity grows quickly, however, with each factor added to the plane's flight dynamics or the game environment.

The inclusion of crosswinds, thermals, and varying air pressure is currently uncommon or nonexistent in flight sim games. It's in this area that NovaLogic CEO, John Garcia, believes the next set of advances will arrive. "Consumers can expect flight simulation games to begin incorporating atmospheric and meteorological conditions such as rain and wind effects," he says. "With the swift advance of technology and the availability of increasingly powerful desktop computers in the marketplace, developers will also be able to model more sophisticated system malfunctions and mishaps, such as holes shot through the wing."

***"Developers will be able to model more sophisticated system malfunctions,** such as holes shot through the wing."*
— John Garcia

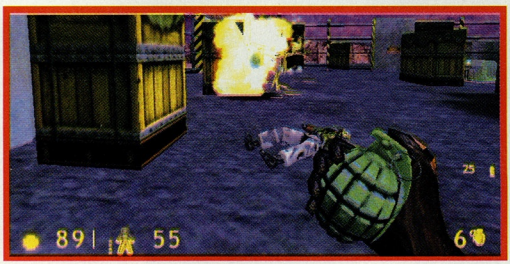
Despite the very strong claims in the area of physical and mathematical accuracy, flight sims are by and large bound by the same considerations that affect other games. "Developers must take into account the law of diminishing returns," says Garcia. "With limited CPU resources, there comes a point where fine-tuning the flight model becomes unnoticeable to the consumer. With simplified physics in the flight model, more bandwidth can be devoted to other aspects of the game, such as management of the AI, complex environments, networking, and graphics rendering."





NovaLogic, developer of *F-16 Multirole Fighter* (top), hopes to introduce the effects of bullet holes to plane dynamics. *Total Air War* (above) demonstrates the absence of crosswinds in this display





Recent releases like *Half-Life* have added just enough real-world physics to enhance the gameplay experience — and gameplay is the bottom line

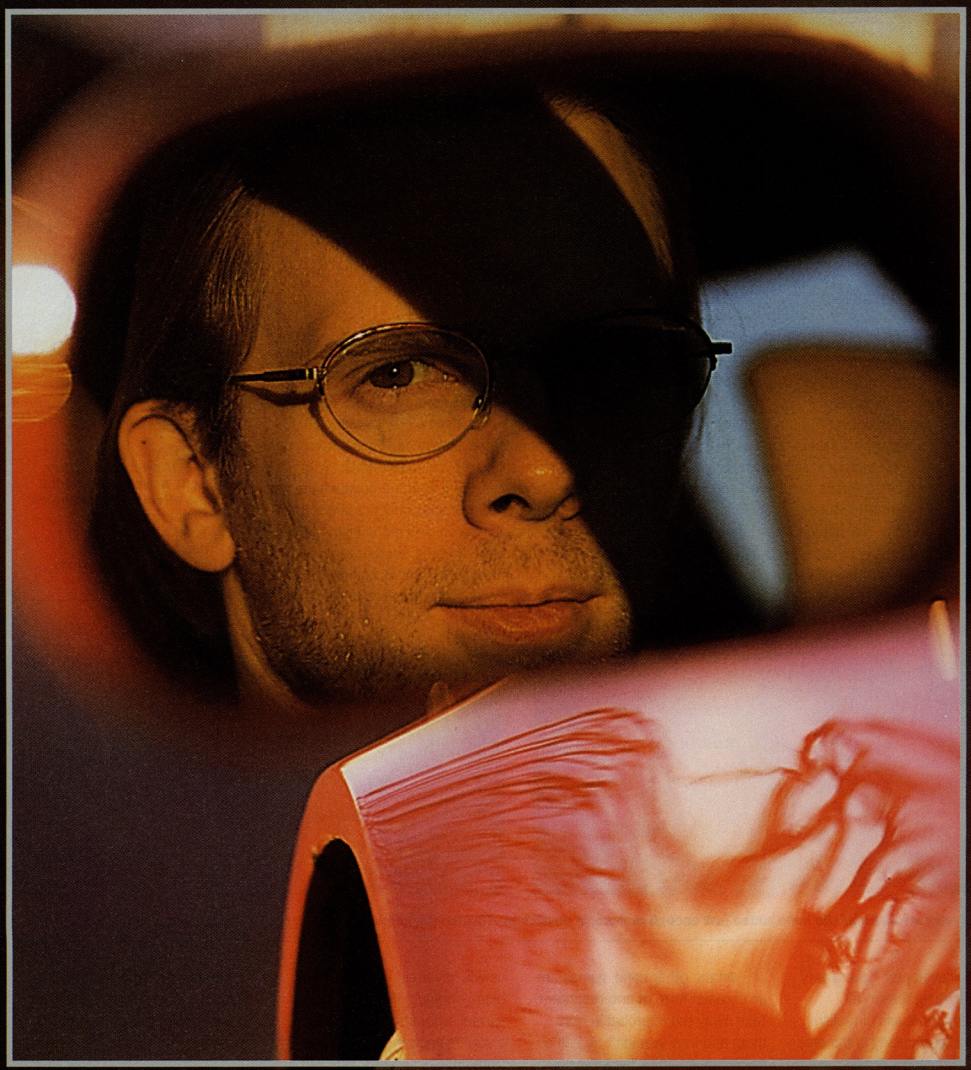
Game developers have a very compelling reason for bringing greater levels of realism into games, particularly in the area of physics modeling. If game worlds can be made to behave in the same way as the real world, players will be able to understand them better. They'll know what to expect in given situations, and thus can be led into more complex, less tenuous gameplay situations that they'll be able to deal with intuitively rather than by trying to second-guess the game designers.

On the other hand, games are an escapist form of entertainment. Take away the improbable from them and they wouldn't be half as much fun. If games began to resemble the real world too strongly, where would gamers be able to turn?

It seems clear that no matter which genre they're dealing with, game programmers will come up winners when they find the right balance between realism and fantasy. Fantasy dungeons that look and behave like real ones, powerful cars or jets that most of us will never get our hands on, blood-and-guts fistfights, and surreal outer space experiences involving geckos can all still benefit from an injection of realism. It doesn't really matter whether it's a realism that's tweaked, twisted, or exaggerated, as long as the resultant games feel consistent and believable. To this end, physics engines seem destined to take charge of games. The 3D revolution is old news. Physics is the new young pretender.

And yet, as with 3D graphics, the hardware considerations are of most concern to developers. They remain very realistic about creating their physics engines, wary of overburdening processors in the arcade machines, consoles, and PCs their games are designed for. No one wants to cripple gameplay. "To truly simulate real-world physics to a substantial degree would take as much computing power as the graphics themselves," points out 3D Realms' Scott Miller. "Maybe that's a new business waiting to explode: Physics accelerator cards!" NG

Last month, **Next Generation** presented an extensive preview of *Quake III: Arena*, id Software's forthcoming game. Designed largely as a multiplayer experience, it features a one-player mode that enables players to face off against progressively more difficult bots, in a simulation of multiplayer gaming. Why lose the traditional, story-based, one-player game? How do you deal with the immense pressure of being on top? If John Carmack had one wish, what would it be? Find out in our look ...



Photography by **Michael Mordler**

INSIDE THE RACING MIND OF JOHN CARMACK

No one sets out to do an *Unreal* killer. Despite the best efforts of the brightest minds in the industry, John Carmack's id Software creates the games, and the engines, to beat. And every time someone comes close, Carmack et al. raise the bar again. **Next Generation** met with John to find out what lies ahead for 3D shooters, and what drives the man widely regarded as the best game programmer on the planet...



MOTIVATION

Next Generation: Most people in the 3D-shooter space are motivated by trying to beat you. What gets you up in the morning?

John Carmack: I was thinking about that just a week or two ago. I was watching that Army commercial, "be all you can be" and all that. And the funny thing was, as corny as it sounds, that's actually the way I have been for quite a while now. It's been a long time since I have actually specifically looked at other people — companies, technologies, whatever — and said, "this is competition." There are all these directions where I see things I want to explore. So almost all the push comes internally. I constantly evaluate myself on things I've done well or done poorly or need to improve. And I seem to find enough motivation just from what I set myself up for without ever having to worry about all the things other people are doing. And I'm sure that saves me a whole lot of stress. I did notice that I stopped following a lot of the web-based coverage because I was just getting annoyed or upset when people posted various things that may or may not be true. This happens especially when you get a fan base pushing this or that; you know, "This is great, this is going to knock you off." I don't need to hear any of that because I've got enough direction just from all the things I've already got planned out.

NG: Does the quality of your work, and id's work, in some part stem from being on top, from not having to pay a lot of attention to what else is happening in the industry?

John: I do think there's a lot of benefit to be had from having enough confidence in your own decision-making process to go ahead and forge forward. It's certainly possible to do something that's pretty good just by looking at the landscape around you. You say, "These are all the things that everyone's done," and you improve from there. That's a valid way of doing things. And there are going to be some high-quality projects that are done like that. But every once in a while you need to take a step back and say, "OK, things have to move in some direction somebody hasn't done before." And that's where you set yourself up for risk, because it's possible to spend a lot of time on something and have it just not work out. If you restrict yourself to things that other people have demonstrated can be done, then you've got a very low-risk project. It's still a huge amount of work to put something like that together, but when you want to go ahead and take a major step into something really different, then you set yourself up for really long schedule overruns, not delivering features you thought you could, various things like that.

QUAKEIII

NG: So, is Quake III going to be a "take a step back" game?

John: The current hardware trends and the things that are available to us put this project at a point where what we're doing is a high-quality refinement of various things. It's going to be a little while before the next scary step in engine development happens — where you get away from spitting back models and environments that you've got rendered and go toward synthesizing environments from another format. We're not there yet. I looked at a lot of things when we were beginning this project. When I was doing what was going to be *Trinity*, I investigated a lot of different things. Things like voxels and all sorts of interesting, very, very different representations than what we've done so far. And I looked over all of it and thought that there are some definite benefits for pursuing those.

It's going to be a little while before the next scary step in engine development happens ... when you go towards synthesizing environments from another format

NG: So why go with what is essentially an improvement on traditional architectures with Quake III? Why not take that scary next step?

John: We're just not quite to the point where we can rely on those new technologies, certainly not at the framerate levels that we want. I had to look at the data and [to make it viable] project toward the point where we've got, say, hardware accelerators that can

render several million triangles a second through an API, not just the raw performance of the card. And you can ship on a DVD with no problems. Then you can look at things like creating a perfect voxelization of the entire world, with no repetition whatsoever, and dynamically rendering resynthesized parts of the environment. And that's a completely different problem than what we're working with right now. But the time is just not quite there yet.

CURVED SURFACES

NG: That said, the *Quake III* engine, with its emphasis on bezier mesh curved surfaces, is basically unlike anything we've seen in realtime before. How hard has it been to implement?

John: Well, this is technology that's been done since the late '60s as far as the different geometric representations go. At the beginning of 1998 I did my curved surface research — I had never done any curve rendering before. The biggest thing I learned was that curved surfaces aren't all they're cracked up to be. When you're used to drawing things with triangles, you think, "Oh, we'll just go to these curved mesh things, and everything's going to be wonderful." But there are so many problems that you aren't even aware of until you actually get in and start using these representations — bad things that happen when you degenerate edges.





NG: You're using nonrational quadratic bezier meshes in *Quake III* — so basically everything is defined by distorting nine control points in 3D space. Why did you decide against cubic patches, which would let you be more precise?

John: What we're using is about the simplest possible representation. With quadratics you can guarantee that they meet up smoothly, but you can't guarantee that the second derivative of curvature stays constant across there. You need a cubic curve for that. But most people don't even know what a second derivative of curvature is and can't really notice it. It's something of mathematical interest and for things like airplane wings. Having a lower degree there is a really useful thing. It just makes it easier for the level designers and so on, because to define, say, a cylinder with quadratic, which is like four patches wrapped around on a side, for us that winds up being nine points around, but with cubic it's like 15.

And then there's the issue of rational versus nonrational. Technically, you need a rational curve to make a conic surface. Now, there are lots of conic surfaces that are pretty important — exact cylinders are the most common things. Our columns in *Quake Arena* are not actually round. They're a quadratic approximation of a cylinder. If I had made rational curves, then they actually could have been round. But it's just not that big of a deal. If you really look at it, especially from a top view, you can see that it's a little bit more squashed than round. But for building things architecturally in the level editor, I'm quite happy with the simplest possible curve representation.

WHAT'S WRONG WITH NURBS?

NG: Are people going to continue to build with polygons? We're hearing Sony drop little hints about NURBS models possibly being incorporated into PlayStation 2.

John: NURBS are not the real successor to polygons. I can say that pretty definitely. They may wind up becoming prevalent through various standards, irrespective of their merit — say, if Microsoft standardizes a NURBS format, then everyone's going to have to support that. It's possible that they might win out as the next format. But it won't be through their own merit. It would be through outside political forces. Things like subdivision surfaces or displacement mapping generally have better results, especially for characters.

NG: What's wrong with NURBS?

John: In the long term, surface representations like NURBS are boundary representations just like polygon meshes. And they're not the right way of doing things. The analogy that I usually make is that NURBS vs. voxels, say, is like vector versus raster graphics. Vector graphics, drawing everything with lines, is basically what we're doing right now in 3D. We've got a description of a couple end points and a connected surface between it. And it has all the same problems that 20 or 30 years ago everybody was running into with vector stuff. You pile on more and more of them, and your refresh rate slows, and you've got this linear dependence on complexity. At the time everybody said, "But a raster bitmap would take a megabyte of memory." So, of course, it was put off. If we did an entire level made out of very detailed voxel representations, it might take a couple gigs of memory. So everyone says, "Oh, no, a couple gigs of



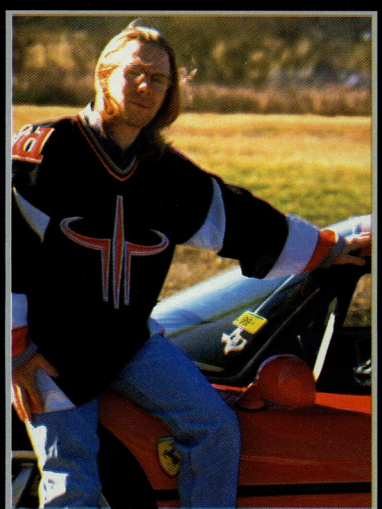
memory seems completely unrealistic." But it's not that far off now. When you can just throw a solid representation of something in there, it's going to be a far better solution than all of this multiresolution modeling, hierarchical surface stuff. That's where things are eventually going to end up. And the transition to it is going to be a God-awful mess. Right now is the golden age of triangle rendering. Everybody's got their shit together, there's some high-performance, high-quality stuff. And there's this really wonderful window — what we're optimizing for right now in this generation. It's a great plateau.

But the only reason we're where we are right now with triangles is because everybody's been cribbing off SGI. The problem is that everybody is basically now where SGI is. You know, all of these companies' in-development hardware is faster than SGI's Infinite Reality. So they're already going into things that SGI hasn't. And it's going to be this chaotic mess. One of my biggest goals over the next year or two is to try and prevent hardware vendors or Microsoft from doing something stupid with their internal stuff. A NURB API would be a perfect example of something stupid. But there's a lot of people who don't know it's a bad idea, and some of them are making important decisions. But it does kind of highlight a problem: When we do step to something new, something that people haven't done before, how is it going to work out? If there are a half-dozen competitive 3D graphics companies, who's going to be the first one to do something fundamentally different? How is it going to intermix with the other things? It's going to be touchy. It's certainly going to be an interesting next five years or so.

QUAKE TRAINING

NG: Despite its advances, *Quake Arena* may not represent a total paradigm shift in technology, but it may in gameplay, with the shift away from a quest or story mode and toward a multiplayer-only paradigm. What are your goals for the gameplay, especially the single-player mode?

John: My goal for the game is [to create something where] a new player can take it, learn how to move the character, learn the basic skills, then pick some levels and play through them with a varying level of bots. Something where they'll start off really easy, build up their skill level, and then go ahead and play in public on the Internet or with their friends. And that's a level of training that we've never had before.



NG: Since *Wolfenstein*, id games have almost defined the state of hardcore gaming on the PC. To some extent, *Quake III*'s emphasis on the online, multiplayer aspects of the game continues that trend. But at the same time you're consciously trying to bring the Hasbro crowd — the casual gamers — into this area of gaming that is traditionally the exclusive domain of the hardest of the hardcore gamers. Why?

John: If we thought we could do a game that just catered to the existing online crowd, and we thought there were going to be as many of them as there were that bought *Quake II*, we might have done a more specialized title. But we don't want to do a niche game. We want to do games that are popular; it's nice to have a game that sells a million copies.

And there are other elements to it. With cyber-athletes and the PGL, there is a future direction there. I don't think it's coming now, or even next year, but as we look forward, making videogames more accessible as a popular sport, moving them into something that more normal people can enjoy and have access to, that's the future. It's important.

NG: Why can't newcomers to *Quake* learn the old-fashioned way, by logging onto a server and getting killed hundreds of times?

John: We have a much higher threshold of entry into the *Quake* community now. There are so many people that are really good on the various servers that if *Quake II* is your first first-person shooter, and you play around a little bit and then jump online, you won't have a very good time. You'll be in levels that you don't know how to run — you won't know the proper strategies. For some people that persevere, that go through the long times of being absolutely pathetic in there, they'll build up their skills. But we'd like to make it so the step of being pathetic in public doesn't exist; we'll give you a place where you can build up a set of skills at your own pace and get to the point where you're comfortable with them before going out. That lets you enter the online community at a reasonable level.

NG: How low, ultimately, do you think the barrier can go? Is there a level of gamer that just will never be able to play a fast, action game like *Quake*?

John: We want to make the barrier to entry as low as possible. We want it to be a game that you can give to



your father to play — somebody that's not really, really seriously into games. Some of the things that we're doing along those lines are designing sets of levels that don't necessarily require looking up and down. We've always pushed that ability, since we've moved away from *Doom*, as an example of, "look what we can do differently." But the honest truth is, it's not an inherently beneficial part of the game.





NG: Some hardcore gamers would disagree with you.

John: It's one of those things. Sometimes when you get a strong game community, you get this unhealthy, inbred push, where the gamers want more and more sophistication, because all of the actions that are in the basic primitives are totally drilled into their minds — they've become second-nature reflexes. These gamers can be working with five fingers and a mouse, and they think it's the most natural thing in the world. But they forget that when people start out in the game, it's not second nature at all. The first time they played with the mouse, they would be looking at the floor, backing into lava, and it's just horrible. But once they get it down, it's the most intuitive, natural way of doing it. So we need to make some things so that beginning gamers can just enjoy the most simple part of the game that's still fun — moving around, and [engaging in] combat and action, with the minimum controls necessary to enjoy that as a baseline experience. Then allow these other things to be added on top. But it has to be in a layered approach, not an all-or-nothing thing.

PLAYING TO YOUR STRENGTHS

NG: One of the points Brian Moriarty has made about *Quake* and other 3D games is that the characters just don't look very realistic compared to real people. With *Quake Arena* you seem to be addressing that by creating an incredibly lifelike animation system. Will that help bring more people into the game?

John: I'm quite happy with the character modeling we've got in there — the separate gesturing with the head and the torso. And that's actually a really good example of what we gain from our tighter focus here. I can guarantee you that if we were doing a game that had a storyline and we were going through multiple levels, I would not have had the time to sit down and do that. It just would have been too low on the priority list. "Oh, you only see other players when you're playing deathmatch, which is only part of the game. We've got all this other stuff to do." Well, when deathmatch is all there is to the game, then we're able to solve that now. And, you know, it's really nice to see somebody leaning over, for example, and looking where they're aiming. It's a pretty nice benefit.

NG: That brings up an interesting point. It seems every id game has had less story. Now, with *Arena*, you've abandoned all pretense of storyline. Is story just something you feel doesn't belong in a game?

John: I do see the strength of doing a game with a really good story pulling you through. And it's not that the move to multiplayer is any statement that we don't think that [having a storyline] is a valid way to design games, or that our way is fundamentally better. It's just that as a company we're better suited to doing this type of thing. I still feel sometimes it would be really nice to design a really well-done [story-driven] game. But to do that you have to have stable technology. You really can't do both at the same time, do something that's extraordinarily creative and technologically groundbreaking. And I think it's likely that we're always going to be pushing the fundamentals and just doing basics like graphics and networking technology and doing a really good job at that.

NG: Is it not possible to do both — good technology and good story, good design — at the same time?

John: There's some interesting things here. Just going by Moore's Law, your power doubles every 18 months. Now, it takes about 18 months to create a game engine. We were able to do *Quake I* and *II* and *Quake Arena* each in 18 months or less. But if you're setting out with all the hubris of "we're going to do the greatest game ever made, with a great story, great theme, and great new technology," you're absolutely guaranteeing, fundamentally, that it's not going to be possible to get it done in 18 months. So you then wind up doing your game technology and then doing the game after that. And you'll very likely wind up with a three-year-plus game development cycle.

Look at *Unreal*, which I think has a lot going for it technologically, but there's nothing new, gameplay-wise, in that. But they did create a really good new engine. Now, if they had said, "We want to do this spectacularly new type of environment for players and a new theme," it would have taken them even longer. You wind up saying, "Is it OK to take five years on a game?" Clearly not, because you start running into these technical design curves. Power's doubling every

18 months, and a game engine is generally going to be reasonable through, say, a factor of four in power, between when it's bleeding edge and when it's not good enough for people. A factor of four is two generations of Moore's Law, that's 36 months — three years. If you have a game design that takes three years, then by the time it's done, it's practically out of its reasonable technology window. Already, while we're doing the technology that's going to be the most appropriate thing for when we ship, in early or middle 1999, we've got a pretty clear idea of what changes need to be made to take advantage of the hardware that's going to be shipping a year or two from now.

NG: So you're content to focus on the technology and let someone else — Valve, say — take 18 months to design a game?

John: I do take a good deal of pride in seeing games like *Half-Life* coming out and saying, "OK, they've built on our foundation, and they've done a spectacular job." I'm not sitting here kicking myself and thinking, "We could have done that game." We're busy doing our games, and they're slightly different now, and I think we do things that best utilize our company's resources. I'm extremely pleased with *Half-Life*. And the funny thing is, you know, *Half-Life* is the one that we were paying the least attention to. It's interesting, because I think some of the developers in the Dallas area are sitting there going, "Oh shit." And we're thinking, "Hey, we get royalties off this. This is OK."

NG: Do you ever have the temptation to walk over to your artists and say "OK, today I'm designing a level."

John: I know I don't have the right skill set to be a level designer. I could create a level, but it would be more like a drafting operation than a really good creative operation. Just like Tim's not likely to come in here and write the next renderer, I'm not likely to do the next fabulous level. And I'm comfortable with that; it's just being honest with yourself about what your strengths and weaknesses are.

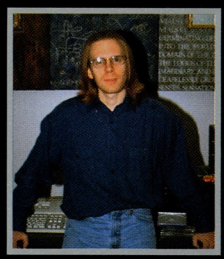
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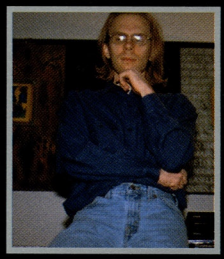
NG: Rumor has it that after *Quake II*, because of all the hassle about what you were going to do next, you disappeared and checked into a hotel in Florida so you could program in peace.

John: That was where I did a lot of my research. I took a stack of SIGGRAPH proceedings and a couple of books and went down there for a week to do research. That was where I actually wrote kind of the beginning of the interface for stuff and my first voxel renderer for my research phase. And that was pretty useful. I'm considering doing that again for a different reason. All the research ideas are basically done now. There's just a huge amount of work that needs to be done. I'm considering going ahead and taking another week where I can just do all of the dynamic interpreter for the client game stuff. It'll probably take me a week of work, and I can do it undisturbed in a hotel.

NG: Do you take any breaks when you go off and do this? I mean, do you stay up ...

John: I work seven days a week. I work every day that I'm near a computer. It's what I do. Programming is the major motivator in my life. It's what I enjoy. And there are always incredible new areas are opening up. It is the thing that I most enjoy. I know that I'm lucky in that, I mean, Id is successful because we're talented and hard working. We've got focus to see it through. But the lucky part is that I actually enjoy all of this. Because if I didn't like it, I could force myself through and do the games and make money and all that and be successful. But it's just really great that I enjoy what I'm doing. I mean, I still get the success, and we still make a lot of money. But the most important thing is that every day I wake up excited to get in to work and find the next thing, fix something up, get it done.





NG: Can you separate John Carmack the programmer from John Carmack the person?

John: No, not at all. Programming is the central focus of my life. And I make no excuses about it. There's always the time where you have people telling you to get a life, you know, "Don't spend so much time on this, you should be broader based." But being well balanced is overrated; I'm really, really good at what I do. I derive a lot of satisfaction from it. I'm able to push ahead on some new frontiers. And I'm completely happy with it, and I make no excuses for the fact that, yes, all of my life is wrapped around computer programming.

NG: What would be your optimal work environment?

John: The optimal thing would be able to stop time and work on whatever I feel like for as long as I can. I am pretty much a roll in here. I mean, I stay in my office, I work every day. And people generally leave me alone. But people do have to come in and interrupt me on different things to go work on other things and get opinions and try and fix bugs with other people. And it's a necessary part of development. But ideally, I wish I had more time. That's the only thing. I wish I could just stop the clock and insert a few days here and there. Because there's never a time where I just think, "Hmm, what should I be working on? I look over here,



[gestures to monitor] and there are probably two thousand things that I need to do in different areas.

NG: That's the rest of your development schedule?
John: This is my to-do list — the random things — little problems, suggestions, and things that could be improved.

NG: Do you ever seek refuge outside of games?
John: I really don't have much in the way of other hobbies. I read a huge amount. I take time every day to read. I usually have a couple technical books and a couple of nontechnical books going.

Being well-balanced is overrated. I mean, I'm really, really good at what I do

NG: At one point, you were very into fantasy.
John: In the old days, we used to have the weekly Dungeons and Dragons games and all that. But I got so busy that that was no longer possible. And there's a part of me that definitely regrets that. All of us would spend most of Sunday playing D&D, and I'd spend quite a bit of time preparing for that. But it got to the point where that time is no longer there. And it does sadden me to not have that creative aspect of anything; it could be designing a game or anything. But the time's not there. You just have to realize that you can't do everything, and you just have to set your priorities and then follow through with them.

NG: Like renting out the local airport runway to test-drive your Ferrari?
John: Yeah. I've spent almost a million dollars on exotic cars. But the great part is that every single day I enjoy them, at least on the ride into work and the ride home. Anything else that I could buy — boats or planes — I would never, ever use. Occasionally we've rented a racetrack or an airport or something. That's not something that you would make buying decisions around. But the cars are something that I can drive every day.

NG: Do you ever see yourself getting bored of game programming?
John: That was a big issue early on at Id. There was a fear that I would be bored and go off to do something weird in operating systems research or something. When Mark Rein was our president there was actually a discussion about me signing a contract saying I'd stay for a certain amount of time. But it turned out that I've been able to find so many interesting things just in the context of games. Things like all the low-level programming on the consoles, where you're doing everything from the ground up. I retargeted the C compiler to the Jaguar, I've written new linkers, and all the stuff I've learned about networking and different communications things. It's been a lot of fun.

I've been able to cover a lot more ground than I expected. Even right now there are a few major parts of *Quake Arena* left to do that will be intriguing. But I've been having an itch to do some vision research lately. It's kind of like graphics in reverse. And that's something that's been kind of tweaking at the back of my mind. But as long as I've got interesting stuff to do in games, it doesn't matter if there's other interesting stuff over there. I'll continue with what I'm doing. If I ever get horribly bored here, then I'll jump off and do some research in some other place.

NG: Would you ever consider a mundane job like aerospace?
JC: I find that there are interesting problems in all aspects of things like that. Writing missile guidance systems would be an interesting problem. Yeah, I can find an interest in just about any difficult problem if there are clever aspects to it. NG



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FROM GENESIS ... TO DREAMCAST

With competition from Nintendo and Sony, the Sega console story is a rough one. Next Generation tracks the tale

Between 1983 and 1989, there was no home console market as such — there was the Nintendo Famicom. This may sound like the stuff of hyperbole, but the figures speak for themselves: By 1989, a quarter of all American homes owned a Nintendo Entertainment System (the machine's moniker in the West); two years later, Nintendo was deemed the most successful company in Japan. Through the combination of brave long-term corporate strategy, great games, cheap hardware, and saturation marketing, the company completely dominated an industry previously shared by the likes of Atari, Coleco, and Mattel. Nintendo became the Microsoft of videogaming.

Master System: Mission impossible

It was against this seemingly infallible competition that Sega launched its Master System in Japan in 1985. On paper, the machine enjoyed several advantages over its behemoth rival. It was technically superior, boasting a larger colour palette, better screen resolution, and more colorful sprites. Furthermore, Sega — already a major player in the coin-op industry — had a range of hugely successful arcade titles available for conversion, including *Hang On* and *Space Harrier*. Sega's long-running home console philosophy, "tempt gamers with flashy in-house arcade ports" was already in place.

The machine also boasted a few unusual extras. A card port, for example, found on the face of the machine was designed to accept less sophisticated games delivered on credit card–sized media. A range of peripherals, meanwhile, included a lightgun and 3D virtual reality glasses. Rather like Nintendo's ROB and Zapper gun, these gimmicks were designed to extend the machine's appeal beyond the commonly accepted constraints of videogaming, an endeavor that has cursed the console market ever since and led almost uniformly to disastrous results (the SNES's bazooka-like Superscope and the Saturn's NetLink Internet peripheral being two more recent examples). One fine idea, however, was the hidden built-in game (inputting a joypad sequence initiated a simplistic, snail-based maze affair), a concept Sony would eventually copy by including light synthesizer software in later Japanese PlayStation models.

But it proved too little too late in the effort to wrestle the 8-bit market away from Nintendo. The Master System lacked a killer app of *Super Mario Bros* quality and, in any case, by the time the Master System was released in key U.S. and Japanese markets, the NES had already built up a commanding presence. More insidiously, Nintendo president Hiroshi Yamauchi had an iron grip on third-party developers. Any company wishing to create games for Nintendo's machine had to sign an exclusivity contract forbidding them to work on any other platform. As the NES had such a strong market share, most developers had no choice but to sign. (This little piece of corporate gamesmanship coincided with the beginning of Sega's difficulties with third-party development.) Although the Master System performed respectably in Europe, impressing gamers with a series of mostly accomplished arcade conversions, it was not the entry into the home market Sega had hoped for.

The Master System lacked a killer app of *Super Mario Bros* quality

Mega Drive: First is everything

By 1989, Nintendo's monopoly was beginning to look precarious. Computer technology never remains stagnant and, as the '90s approached, the NES was tottering into its twilight

years. Characteristically, however, Yamauchi refused to acknowledge any potential problems. There were fears that announcing a new system would alienate NES owners and, besides, the company was sure that the very existence of its vast user base would counter any superior technologies that might come along.

To begin with, he was right. The Mega Drive was launched in March 1989 in Japan then in the U.S. as the Genesis that fall, over a year before the SNES debuted. Sega, of course, could afford to sacrifice its hold on the 8-bit market simply because it had no hold on the 8-bit market; its gamble was that better technology alone would topple the NES. The Genesis hit the market as the most advanced system available, with a 16-bit, 7.62MHz 68000 processor, a 512-color palette and two character planes.

And Sega still had its commanding strength in the arcade market to call upon. Thanks to the Genesis' relatively powerful architecture, the likes of *Altered Beast*, *Golden Axe,* and *Super Hang On* were sparkling conversions, superior to anything previously seen on home formats.

But the NES still battled on. *Super Mario Bros 3*, released in 1990, became the biggest-selling videogame in history, selling 7 million copies in the U.S. alone. Alongside this were a number of third-party triumphs including early efforts from the Rare stable such as *RC Pro-Am*. Nintendo still had the software advantage.

However, the tide was turning, and not just against the NES but against Nintendo's draconian approach to third-party development. In the West, especially, the company's strict exclusivity clause alienated free-minded developers, so when Sega offered a much less restrictive licensing deal it attracted companies that had previously steered clear of consoles. One example was burgeoning giant Electronic Arts. EA founder, Trip Hawkins, signed up for Genesis development in 1990 and the software company immediately brought its *John Madden Football* to the platform. It was the beginning of EA's long-running licensed sports title series that attracted thousands of sports-crazy Americans to the 16-bit machine and still pays tidy dividends on today's platforms.

Nintendo finally realized the threat, and in October 1990 they launched the Super Famicom — a 16-bit machine on which the company's R&D department had been working for several years. The specs were immediately impressive (a palette of over 30,000 colors, four layers of independent scrolling and the ability to display 128 16-colour sprites at once), plus there was a software ace up Nintendo's sleeve: Shigeru Miyamoto's *Super Mario World*.

Sega's response was inspired. The company needed something that could blow away the rather sedate offerings from Nintendo — more specifically, their pudgy plumber, Mario. The result was *Sonic the Hedgehog*, developed in Japan by a small Sega-licensed team and released in 1991. The game may have lacked the depth of Nintendo's *Super Mario World*, but it had a hip, spiky-haired hero, a lightning pace, visual flair, and the backing of a superlative marketing campaign. The modern videogame industry, built around cutting-edge imagery and cool ads, began here. Nintendo's dominance of the industry was effectively over.

From this point until 1994, the two machines competed on fairly equal footing, Nintendo garnering gamers' support with a legendary SNES conversion of *Street Fighter II*, Sega pandering to the desires of more "street level" gamers with games such as *Mortal Kombat* for the home. Videogaming began to go mainstream (fueled, in part, by the popularity of sports games on Sega's machine), paving the way for the pastime's potential in the following years.



The Genesis' success can be attributed to a combination of technology and marketing. The console gave gamers access to true arcade-style visuals, while Sega's ad campaigns were aggressive and pervasive

Interlude: Sega loses the plot

By 1993, the 16-bit console market was waning, and the world's attention was turning toward CD-ROM. Systems like the Commodore CD32 and Philips CDi were failures, but together with the PC they introduced the concept of multimedia and, more importantly, of full motion video footage and the interactive movie. In the background, ex-EA honcho Trip Hawkins was also busy evangelizing his 3DO project — a relatively powerful 32bit console. The industry was stumbling forward, looking for the next generation of interactive home entertainment.

Considering the Genesis' success against the SNES, it was no wonder that Sega was keen to keep gamers loyal to its brand name during this explorative period. But this desperation led to a series of abortive and unpopular platforms. First up was the Sega CD, a basic CD-ROM drive addition to the Genesis which, for

HOW NOT TO DESIGN VIDEOGAME HARDWARE: THE SEGA WAY

Sega's past consumer hardware failures are manifold. In fact, rarely have so many successive blunders been made



The Sega CD concept (the second incarnation is pictured) was Sega's first step on the road to disaster



While the 32X enjoyed a modicum of decent software support, it was clear that it was a stopgap device



The Sega Neptune, which was never officially released anywhere, was the last blot on the troubled 16-bit landscape

the princely sum of $229, offered little but clever sprite effects, FMV, and CD audio. While *Night Trap* created a stir in Congress thanks to its (supposedly) risqué FMV content, even Sega's increasingly hip TV ad campaigns couldn't sell dreck like *Sewer Shark* and *Cobra Command*.

In March 1994, with the 3DO bandwagon gathering speed, Sega announced the 32X, a 32-bit add-on for the Genesis. Again, despite promises to the contrary, the machine lacked software support and, with rumors of the Saturn already circulating, few gamers were interested in what was obviously a stopgap platform.

This was a disastrous time for Sega. In a 12-month period the company managed to work its way through most of the solar system in aborted or failed projects. The Jupiter, a cartridge version of the Saturn, was scrapped. The Mars, an early codename for the 32X, failed. The Neptune, a proposed 32X/Genesis combo was also scrapped. Finally, Sega decided to stick with Saturn — a relief to those envisaging the launch of a Sega Uranus.

Saturn: DOA?

In developing and releasing a 16-bit system before its major competitor, Sega more or less assured the success of the Mega Drive. It's ironic, then, that following exactly the same gameplan for the 32-bit generation would be its undoing.

Early Saturn specs were already circulating when, in late 1993, Sony announced that it would be entering the console market with a 32-bit CD-ROM machine set for launch in Japan in late 1994. Preliminary specs hinted at a machine many times more powerful than the Saturn, allegedly prompting Sega president Hayao Nakayama to storm into the company's R&D labs and berate his engineers for being beaten by a newcomer. By now, however, it was too late to make significant changes to the twin Hitachi SH2 processor setup, so Sega simply added a second video-processing chip to assist with textures.

The Saturn's innards were, in short, a mess. The two-chip setup was powerful, but it meant programmers had to schedule the processors so that they worked efficiently together — a complicated procedure. Plus, two chips didn't necessarily mean twice the power. Both units were accessing the same memory and internal resources, the end result being approximately one-and-a-half times the power of a single processor.

Compare this to the sleek internal architecture of the PlayStation, with its single-unit CPU and powerful Geometry Transfer Engine (which some Sony execs claim to be the console's most valuable component), and it's no wonder many developers were loathe to tackle Sega's system. Indeed, since the machine's inception, only a handful of third-rate, third-party titles have debuted on the Saturn.

In many ways, the philosophy behind the machine was all wrong. While the whole videogame industry was moving inexorably toward 3D — including Sega's own arcade divisions with the likes of *Virtua Racing* and *Virtua Fighter* — the company chose to create a console that could handle huge 2D sprites and smooth-scrolling bitmap backgrounds. There were no similar facilities for true 3D. Indeed, the machine calculated in quads rather than triangles, which made porting games between the Saturn and other platforms a headache of significant proportions.



The Euro Saturn wasn't nearly as bold as the model available in other territories, but its one-color case design set the precedent for its eventual 128-bit successor

Admittedly, some Japanese developers have benefited from this 2D-biased setup. Capcom, with its growing range of *Street Fighter*, *X-Men,* and *Marvel Super Heroes* titles, has fully exploited the machine's sprite power, as has SNK with its own beat-'em-up catalog. Similarly, several companies have kept the spirit of the scrolling shoot-'em-up alive on the machine, most notably Treasure with *Silhouette Mirage* and the more recent *Radiant Silvergun*. Indeed, the Saturn has always proved more popular in the East. Despite intrinsic technical difficulties, it started well against the PlayStation when both were released in Japan in the winter of '94.

However, apart from the modest success in Japan, the Saturn may well go down in history as a noble failure. Sony came into the industry with fresh ideas, an easy-to-use machine, and a brutally effective marketing campaign. The company also seemed to be more intent on evangelizing Western developers — showing off the technology early, listening to input, even buying a British company, Psygnosis, to head up game development in Europe. The PlayStation may have been unpopular with hardcore coders who liked to program "straight to the metal" (Sony wouldn't let them, Sega would), but it's been a long while since programmers had a say in which platform received publisher support.

PLAYING THE 32-BIT GAME

Unlike the PlayStation, which remains outwardly near-identical in every territory, Sega was happy to experiment ....



The Saturn's outwardly modest appearance belies its technical ability. If only it wasn't so tricky to use ...



The Japanese Saturn is, in fact, a hugely successful machine, having sold over 5 million units in its native territory



A 3DO-style licensing model existed with the Saturn, but only JVC (with its V-Saturn, above) and Hitachi signed up

Dreamcast: A winding road

The story of Dreamcast's inception is a tortuous one. Rumors of a Saturn sequel began back in 1996, with the codename Dural, but few trustworthy technical details were coming to light.

In March '97, **Next Generation** learned that the machine — now apparently codenamed Black Belt — would be based around a customized version of VideoLogic's PCX2 graphics chipset, and that Sega had also approached Microsoft with the idea of using its technology in the console. The second rumor would later be confirmed when Sega announced its adoption of the Windows CE system.

Both revelations were greeted with excitement. Sega, it seemed, was looking to rectify its mistakes with the Saturn by creating a more user-friendly development environment. Plus, the use of so many PC-specific elements would mean easy conversions between Sega's platform and the PC (difficult with the Saturn due to its quad- rather than triangle-based 3D calculation). The Black Belt format would not exist in isolation like the Saturn; it could be easily adopted by publishers as part of a multiple-platform development schedule.

However, the story was far from over. Just weeks later, 3Dfx executives announced their intention to go public, which meant that all current projects had to be made public for prospective shareholders. One such project was a deal with Sega to produce a version of the Voodoo chipset for Black Belt. Exit VideoLogic. Enter 3Dfx.

But not for long. In late July '97, Bernie Stolar (vice president of Sega America) called representatives of 3Dfx to tell them the deal was off. Once again, rumor and speculation took over. Sega was alleged to have reverted back to the Dural codename, and then in early '98 a new moniker, Katana, began circulating the international grapevine. Along with the speculation came a few tantalizing details: NEC/VideoLogic were back on the project, a modem would be built into the system, there would be more polygon-pushing power than Model 3. And a theory surfaced: Sega had been working on two Saturn sequels — Black Belt with 3Dfx in the States, and Dural/Katana with VideoLogic and NEC in Japan. The latter project proved superior and was officially approved.

Until now the hypothesis has never been proven, but "official" confirmation of the new console came on May 21 this year when Sega publicly announced its Dreamcast hardware, complete with a 128-bit RISC CPU, VideoLogic PowerVR chipset, modem, and revolutionary joypads. More importantly, third-party support — the Saturn's greatest failure — is set to be massive.

Ironically, Sega is now in the position it was in 10 years ago, facing a seemingly invincible opponent in Sony which refuses to give up on its hugely successful, yet long-in-the-tooth hardware. Could the Dreamcast format become the true successor to the Genesis, an epoch-making technological leap that sweeps away a whole generation of previous platforms? Considering the convoluted story to date, anything seems possible. NG



The Genesis flourished with games like *Golden Axe* (left). When Sega bolted on extra technology with the Sega CD, however, dreck such as *Night Trap* (center) and *Ground Zero Texas* (right) was the result



Capcom produced a respectable version of *SFII* for the Genesis (left), while Sega used the 32X to bring a "special edition" conversion of *Virtua Racing* (center) to the machine. Saturn *Space Harrier* (right)



The advent of fast, fluid polygons on a home console was marked by Saturn *Virtua Fighter* (left), but the machine truly excelled with full-on 2D, as demonstrated by *X-Men* (center) and *Radiant Silvergun* (right)



Its past may be littered with convoluted architecture, but Sega's console future remains distinctly one shape, and it looks like this

ON THE PERIPHERY: MORE SEGA HARDWARE MISSES

CDX Another post-Genesis mishap, the CDX (or MultiMega as it was renamed for Europe) was a portable version of the Sega CD, launched at the 1993 Consumer Electronics Show. Encumbered with a single-speed drive and a high price tag, it was never going to be more than an esoteric novelty.

Genesis six-button joypad The Genesis originally shipped with a simple four-button pad, but with the release of the SNES and the arrival of fighting games like *Street Fighter II*, it was clear players would need a more complex interface. Another open-and-shut case of Sega failing to predict industry trends.

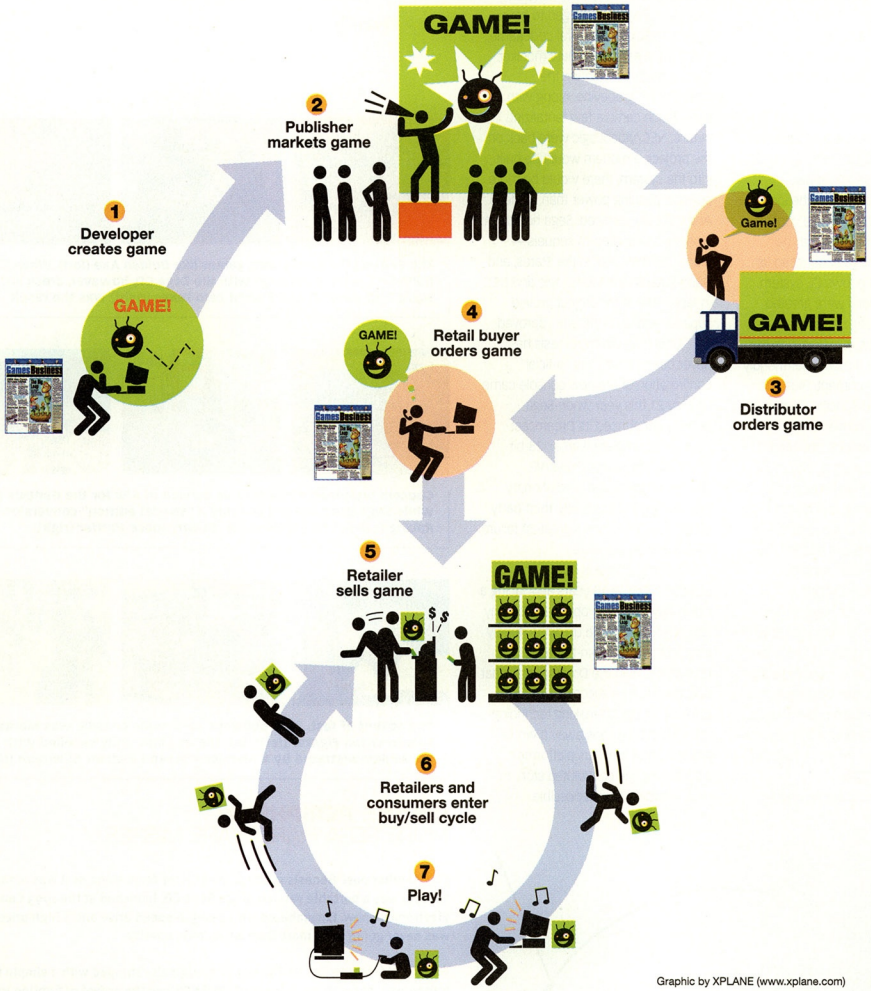
SVP chip Another launch that saw Sega playing catch-up to Nintendo. Following the release of *Star Fox* on the SNES — premiering the Argonaut-designed SuperFX chip technology — Sega came up with its own cartridge-based graphics hardware, designed to boost the 3D capabilities of its games. The SVP appeared in a Genesis version of *Virtua Racing*, but that was its only significant appearance.

Game Gear Several companies came up with their own handhelds in the wake of the Game Boy launch in 1989, but Sega's Game Gear was one of the more promising contenders. Boasting a 4,096-color display and Master System–based innards, the machine had some technical strength. Unfortunately, the higher price tag and short battery life put off many gamers.

Saturn analog pad Once again, Nintendo innovated and Sega copied. In direct response to the N64's joypad, Sega released this in 1996 in conjunction with *NiGHTS*. Again, the technology was not widely adopted.

Saturn modem A precursor to the Dreamcast modem, this Saturn Internet peripheral was launched in Japan in July 1997, along with a keyboard for email use. A later U.S. version, the NetLink, was a failure.

The interactive entertainment channel (simplified)



Graphic by XPLANE (www.xplane.com)

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This month's biggest release is also its most mediocre,
but it's not really the game's fault ...

FINALS

The definitive opinion on the latest releases

Next Generation strives to make every review as comprehensively critical as we can. Whether we liked a game or hated it, we give you all the information we can as to why.

★★★★★
Revolutionary
Brilliantly conceived and flawlessly executed; a new high watermark.

★★★★☆
Excellent
A high-quality and inventive new game. Either a step forward for an existing genre or a successful attempt at creating a new one.

★★★☆☆
Good
A solid and competitive example of an established game style.

★★☆☆☆
Average
Perhaps competent — certainly uninspired.

★☆☆☆☆
Bad
Crucially flawed in design or application.

Denotes a review of a Japanese product.



84


88


87



89


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93


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92

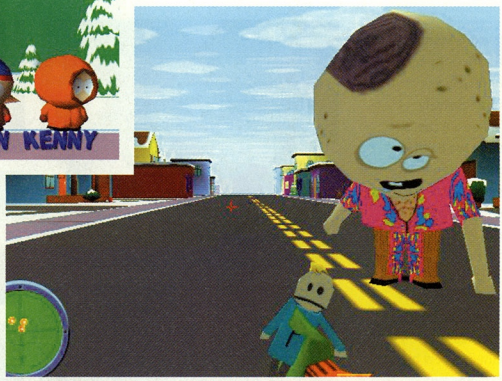
84	**South Park** — Crude cartoon antics you control!	PC, N64	
87	**Starsiege: Tribes** — The best multiplayer shooter yet?	PC	
88	**UO: The Second Age** — *Ultima Online* gets a major facelift	PC	
89	**Castlevania** — Another classic series moves into 3D	N64	
	Delta Force	PC	90
	Mr. Domino	PlayStation	90
	O.D.T.	PlayStation	90
	Blackstone Chronicles	PC	91
	Chaos Gate	PC	91
	Heretic II	PC	91
	Dark Side of the Moon	PC	92
	Gangsters	PC	92
	Mask of Eternity	PC	92
	BattleTanx	Nintendo 64	93
	Star Wars: Rogue Squadron	Nintendo 64	93
	Uprising 2	PC	93

It's simple and vaguely offensive — it's a *South Park* game, what did you expect?

SOUTH PARK

Publisher: Acclaim
Developer: Iguana





Much like the show it's based on, the graphics in *South Park* are simple if odd and even disturbing at times

It would be far too easy to thump this game as yet another licensed Acclaim title that won't exactly set the world on fire, but at this point, let's just take such things as read, hmm? To be fair to Acclaim, whatever its relative merits (or lack thereof), *South Park*, the cartoon, doesn't have a lot of depth, either. In fact, it's practically a dream license: Stupefyingly simple graphic design, totally unsubtle humor, and an anything-goes sensibility. It would probably take more effort to make a bad game based on *South Park* than it would to crank out one that was competent and acceptable.

Which is exactly what *South Park*, the game, is. Developed by Iguana using its own *Turok* engine, *South Park* is a first-person shooter in which you control Kyle, Stan, Cartman, and Kenny as they deal with aliens, killer turkeys, misshapen mutants, and other enemies from the show.

After sweating bullets over *Turok 2*, the developers at Iguana must have looked to *South Park* as a sort of working vacation. After all, it uses an existing engine, it's doubtful any of the character models took more than a day to put together, and the show's primary color visuals insured that all the textures could be painted up in about five minutes. That left level and weapon design to take up the bulk of development time, and in the latter case, there's a fair amount of creativity in evidence. From a simple snowball to the cow launcher, practically every weapon has some twisted touch to it, either by itself or in its trendy "secondary fire" mode. The snowballs, for example, can be made out of, well, let's just say yellow snow; they're far more damaging but take more time to fire (insert sound of zipper going









Yup, it's snow. Lots and lots of snow. Although it fits with the show, it also means that the game's textures must have been easy to paint

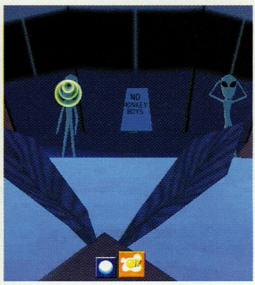








Later levels bring the kids into the alien ship, but while you'll likely find the difficulty level a lot higher, don't expect the level design to differ significantly from what you played through earlier — level design is the game's weakest point



underneath. And the long string of expletives that erupts from Cartman when he gets nailed in multiplayer mode is enough to singe your ears.

It's the multiplayer mode that folks will probably appreciate most. As a party game, it's almost irresistible, and some 20 characters from the show, from Cartman's Mom to Big Gay Al are available. It's as much of a hoot as the show itself.

But once the initial chuckles wear off, whether in multiplayer or single-player mode, you're left with a first-person shooter much like any other, and in fact, not as well-designed as most. It's as fun as the show it's based on, but its appeal is just as fleeting.

RATING ★★★☆☆

down and liquid tinkling here).

Level designs, on the other hand, are no more sophisticated than Cartman's taste in snack food. Most levels are relatively straight and narrow, "A leads to B leads to C" affairs with little or no variation in enemies or scenery. Further, in the single-player game, enemy AI is extremely basic (in fact, for the first few levels they pretty much fall back on the "running straight at you while zigzagging a little" technique that's been around since *Wolfenstein 3D*). On the other hand, this doesn't mean the game doesn't ramp up in difficulty with surprising speed — if you're not careful, you'll find yourself ganged up on by more mutants than you can shake a dodge ball at by the second level.

However, all this simplicity allowed the developers to devote space to a surprisingly rich collection of voice samples, which is, we're willing to bet, what the game's main draw will be for fans of the show. The intro sequence, for example, is a complete recreation of the cartoon's "Goin' down to South Park" title sequence, rendered in the game's engine in realtime 3D. The show's creators, Trey Parker and Matt Stone, contributed all the dialog, so it sounds exactly right — bleeped-out expletives and all.

Fans of the show will be gratified to find that the crotch and fart joke sensibility has been, by and large, retained (in fact, it's worth pointing out that there's also an Nintendo 64 version of *South Park*, with most of the content intact, making it surprisingly raunchy for a game released on a Nintendo console).

The kids get their "mission briefings" from the libidinous Chef in his '70s-era living room, while his latest conquest lounges on his bed in the background, covered by a sheet but plausibly nude





One of the game's strong points is its weapon designs, including the cow launcher, chicken launcher, and Terrance and Phillip gas attacks, are imaginative, if twisted, well in keeping with the show's sensibility





At the end of the day, it's a cut above Acclaim's usual licensed fare — which, of course, doesn't really say much

Help us help you. We want to make **Next Generation** even better...
and the **best way to do it is to ask you.**

NG SURVEY

We want your opinion.

1. Do you play games on a PC, console, or both? ❒ PC ❒ Console ❒ Both

2. How long have you been playing computer and video games?
❒ 1–4 years ❒ 5–9 years ❒ 10–14 years ❒ 15–19 years ❒ 20 or more years

3. On average, how many hours per week do you spend playing games?
❒ 1–5 hours ❒ 5–10 hours ❒ 10–15 hours ❒ 15–20 hours ❒ 20 hours or more

4. How many PC and console games do you purchase in a typical month?
(Please select one for each game type.)
PC ❒ 1 or less ❒ 2–5 ❒ 6–10 ❒ 11–15 ❒ 16 or more
Console ❒ 1 or less ❒ 2–5 ❒ 6–10 ❒ 11–15 ❒ 16 or more

5. What is the average cost of these games?
❒ $1–19.99 ❒ $20–39.99 ❒ $40–59.99 ❒ $60 or more

6. How much money have you, or others in your household, spent on game software in the last 12 months?

6a. How much money do you, or others in your household, plan to spend on game software in the next 12 months?

Amount spent	Last 12 months	Next 12 months
$1–$100	❒	❒
$101–$250	❒	❒
$251–$500	❒	❒
$501–$750	❒	❒
$751–$1,000	❒	❒
$1,001–$1,500	❒	❒
More than $1,500	❒	❒

7. Which of the following game systems do you:

Platform	Own	Play primarily	Plan to purchase
PC	❒	❒	❒
Sony PlayStation	❒	❒	❒
Nintendo 64	❒	❒	❒
Color Gameboy	❒	❒	❒
Sega Saturn	❒	❒	❒
Sega Dreamcast import	❒	❒	❒

8. Of the next-generation machines coming out in the next few years, which would you choose to buy?
❒ Sega Dreamcast
❒ Sony's next system
❒ Nintendo's next system

9. Do you buy the latest electronic equipment and gadgets within the first six months of their release?

9a. Do you buy the next-generation game hardware within the first six months of their release?

	Electronic equipment and gadgets	Next-generation game hardware
Yes, always	❒	❒
Yes, usually	❒	❒
Yes, sometimes	❒	❒
No	❒	❒

10. On a scale from 1 to 5, how would you rate of the following regular sections of **Next Generation**? [1 = Not interested, 5 = Very interested]

Section/article	1	2	3	4	5
CD	❒	❒	❒	❒	❒
Intelligence/News	❒	❒	❒	❒	❒
Big in Japan	❒	❒	❒	❒	❒
Alphas/Previews	❒	❒	❒	❒	❒
Features	❒	❒	❒	❒	❒
Interviews	❒	❒	❒	❒	❒
Rating/Reviews	❒	❒	❒	❒	❒
Letters	❒	❒	❒	❒	❒
Ending/Retroview	❒	❒	❒	❒	❒
Now Hiring	❒	❒	❒	❒	❒

11. What is your gender? ❒ Male ❒ Female

12. How old are you?
❒ Under 12 ❒ 12–17 ❒ 18–24 ❒ 25–34
❒ 35–44 ❒ 45–54 ❒ 55 or older

13. How did you receive this month's copy of **Next Generation**?
❒ I'm a subscriber ❒ I bought it at the newsstand
❒ It belongs to a friend ❒ Other

14. Of the next-generation machines coming out in the next few years, which would you choose to buy?
Sega Dreamcast ❒
Sony's next system ❒
Nintendo's next system ❒

15. What is currently your most important source of game purchasing information? Please rank by order of importance.
Internet _____
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Radio _____
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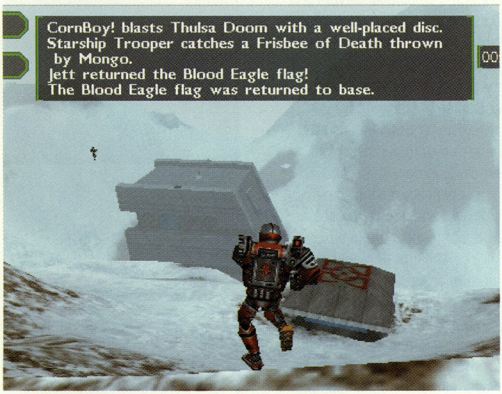
NEXT GENERATION

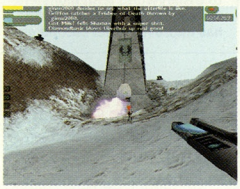
The rush of great **first-person shooters** continues with a **multiplayer masterpiece**

STARSIEGE: TRIBES

Publisher: **Sierra**
Developer: **Dynamix**

While many excellent first-person shooters in the last year have challenged the *Quake* series in single-player excitement, the reigning multiplayer champ on the Internet is still *Quake 2*. While all of the new games have tried, none have had the originality or style to convert players en masse. *Tribes* is the first game that stands to not only better the Internet experience of *Quake*, but it also challenges the paradigms of multiplayer Internet action gaming as well. It is a tour-de-force of gameplay, graphics, and smart design.







In one scenario, you can load up an APC with some friends and stage a commando raid on the enemy base

The first thing you'll notice are the huge, sprawling environments. Unlike the angular interiors the genre has given us so far, *Tribes* has full outdoor landscapes complete with mountains and deep valleys. To help traverse this awesome landscape, the wily developers at Dynamix have outfitted every player in the game with a jet pack. Mastering the use of this pack is one of the first things you must do when playing *Tribes* because the ability to navigate in three dimensions adds a tremendous new dynamic to the game. Skillful players will know how to use their jet packs to fly over unsuspecting enemies or jump across large gaps to infiltrate an enemy encampment. Other innovations include the ability to drive airborne vehicles and the ability to take manual control of any defensive turret at your base. Add to all this the fact that every player can use a sniperlike zoom at any time to view targets (and presumably shoot them) and the game become s a unique kind of high-intensity virtual battlefield.

Adding to this battlefield feel is the fact the *Tribes* is multiplayer only and primarily a team-based game instead of the standard "player vs. everybody else" deathmatches we've come to expect. Capture the flag is the most popular way to play, but there are also missions based on "defend and destroy" and "retrieve and hold" themes that are a blast. Even though the interface will seem a little foreign at first, it's streamlined perfectly to facilitate players' cooperative efforts. There is also a standard deathmatch mode, but after playing the other games, it just seems bland.

While the design is excellent, the technology is also superior. Although a 33.6Kbps modem is the bare minimum necessary with most of today's Internet action games, at 33.6Kbps *Tribes* runs silky smooth with very few hitches. It is truly the first first-person shooter that really works well for the Internet. The graphics technology used is also superlative, with great visuals under 3Dfx Glide (or OpenGL with the promised patch, which should be out by the time you read this). The software version isn't nearly as impressive, but still holds its own.

Tribes has the design and the technology to be the next standard in Internet action gaming. There are already over 100+ servers available (all free) and more are popping up all the time. This is the first of a new breed of game and we can't recommend it enough.

RATING ★★★★★





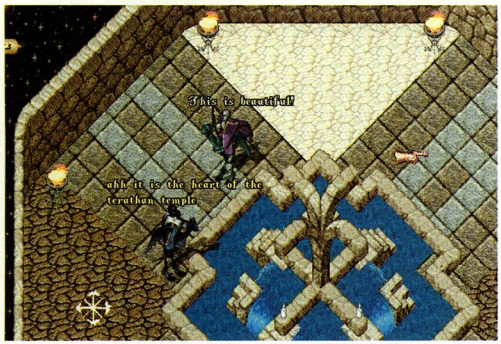
The third-person perspective is very helpful when trying to gauge how to use your jet pack

Gaming's grandest multiplayer experiment
gets a much needed **shot in the arm**

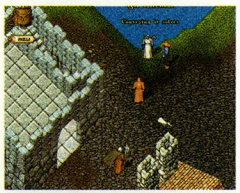
ULTIMA ONLINE: THE SECOND AGE

Publisher: **Electronic Arts**
Developer: **Origin**

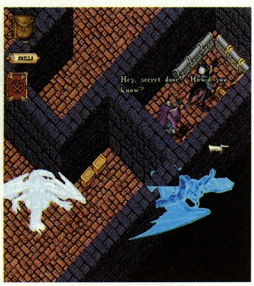
In 1997, Origin attempted to raise the bar of online gaming by providing a massive, open-ended virtual world that could support thousands of players at a time. In theory, it was a brilliant concept. In implementation, however, it faltered badly: The lag was atrocious, the economic model was crippled, the monsters were practically endangered due to low respawn rates, the servers were unstable, player-killers were rampant, and the game sported a host of bugs, each more frustrating than the last.



The Second Age **adds a number of new areas, monsters, and features, but the best improvement is in dramatically reduced lag time**







The biggest kick for many players, however, is likely to still be the game's function as a big, pretty chat room

However, *The Second Age* is the game that *Ultima Online* should have been. The gorgeous world of Britannia is true to the *Ultima* series — towns, villages, landmarks, and shrines are all in place — but it's really a whole new world. Two new cities, Delucia and Papua, provide a welcome haven, and adventurous players will find themselves neck-deep in lava lizards and giant toads in the new dungeons and fortresses.

Practically every technical and play-balance issue in the original *Ultima Online* has been improved or corrected. Additional servers and updated code have taken a huge bite out of the lag. Monsters are plentiful, as are wild animals and magical reagents. Nonplayer characters no longer offer nonexistent quests and usually have money to purchase your excess inventory items, and notoriety finally means something.

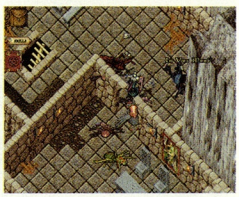
Even the population seems to have improved. Although player-killers still haunt Britannia, they're more of an occasional annoyance than a daily hazard. Stronger in-game penalties and an established bounty system make life difficult for the casual killer. So the rare player who does try to take your virtual life is generally role-playing an evil character, rather than frying your butt because it seems like fun and he won't be penalized for it anyway.

Of course, this isn't to say that the game is perfect. The lack of built-in quests is disappointing because the *Ultima* tradition is built on epic struggle, but here there are no momentous goals for heroes to pursue. Origin game-masters and organized players compensate by holding clan wars and contests, but it's just not the same as having a real, long-term heroic quest.

On the technical side, lag is still an issue during peak hours, but nowhere near as bad as it was. It manifests mainly in the most populated areas of town, so getting to and from the bank can be a little hairy. In addition, characters cannot be moved between servers. If you'd like to travel with a friend who is playing on one server but you've been playing on another, one of you will have to start over.







Although it still smacks of a trip to Disneyworld with monsters instead of rides, *Ultima Online* has improved in its second age

But, by and large, these are annoyances rather than serious faults. Between the familiar landscape, the exotic additions, the newly solid engine, and the addictive gameplay, this once-tarnished game has finally begun to shine. If you're a fantasy role-player, an online chatter, an *Ultima*, or a previous player who logged out in the Dark Times and never returned, it's time to pack your bags for Britannia. *The Second Age* is an Avatar's dream come true.

RATING ★★★★★

Konami's classic series goes under the 3D knife

CASTLEVANIA

Publisher: Konami
Developer: Konami

After the immense success of *Metal Gear Solid*, Konami's focus has shifted to another of its classic franchises, the *Castlevania* series. Though the series has hopped around from system to system (its latest incarnation, *Symphony of the Night*, came out on PlayStation), the legion of *Castlevania* fans has kept growing.

Many wondered how a 2D game would fare on a system known for its 3D capabilities, and less than stellar sales of *Symphony of the Night* prodded Konami into taking their flagship series to the next level. But how would a series so firmly rooted in the 2D mindset fare, especially in the post-*Zelda* era of N64 gaming? The answer is: Not too bad, but not exactly great.

Castlevania for N64 introduces us to two new characters in the series' growing cast: Reinhardt and Carrie, and each adventurer has his or her own path to follow, each slightly different from the other. The game's world has been completely constructed out of smoothly textured polygons, making every action a completely 3D experience. Each character has his or her own individual weaponry: Reinhardt packs a whip and sword, while Carrie relies on projectile magic attacks. Konami has added a lock-on feature to remedy the sometimes-clumsy combat system, which makes much of the fighting fluid and easy to manage. This feature works well when traveling areas stocked with countless enemies, but it requires less skill than usual in that you need only continually press the attack button in order to get through most areas. Instead, *Castlevania* emphasizes exploration by providing large open areas and countless items to collect in order to beef up your character's inventory. Even the plethora of massive bosses the series is known for return in three dimensions to tax your dexterity.









***Castlevania* highlights exploration and interaction with objects, reducing the emphasis on action**



Bosses and enemies lurk in almost every open area of the game, making travel very dangerous. Expect to save often



New features include a 24 hour clock, which gauges some of the events within the game as well as the types of enemies you'll encounter in certain areas. There's also a host of new characters who provide clues and keys to important quests and areas. But even with these interesting and sometimes clever new additions, *Castlevania* never feels as though there are enough elements carried over from previous *Castlevania* games to give this version continuity and context within the series. And the game itself, though thoroughly playable and competent, never goes beyond its initial promise of an average action title with adventure elements. The bosses even seem watered down, reducing the challenge level to nothing more than any other run-of-the-mill beat 'em up. Admittedly, it's difficult for any 3D title on N64 to outshine Nintendo's elven Link, but what *Castlevania* does possess in its favor (an appropriately moody soundtrack and an immersive, dark fantasy environment) can't elevate how average the gameplay is.

With Konami continually dabbling in 3D on the PlayStation as well as in its upcoming N64 lineup, the promise within *Castlevania* is evident in some of the game's stronger features. But overall, the game fails to revitalize a series that has always been so flawlessly defined in two dimensions.

RATING ★★★☆☆

O.D.T. – ESCAPE OR DIE TRYING

Platform: **Playstation**
Publisher: **Psygnosis**
Developer: **Psygnosis**

This game is such an obvious knock-off of *Tomb Raider* that there are critical *Tomb Raider* features that aren't even mentioned in the manual, such as the fact that using the R2 button to walk keeps you from falling off ledges. It would have been nice of them to let you in on that particular technique because until you figure it out you either have to creep along or you fall a lot. Maybe they were saving it for the clue book.

The story involves the crew of a dirigible called the *Nautiflyus* that crashes someplace dangerous. There was a magic pearl on board that the crew needs to retrieve and in the process you have to repair your balloon. It seems as if the developers were trying for some kind of Captain Nemo meets *Quake* thing but it doesn't work. *Nautiflyus — Nautilus*. Get it? Almost as tiresome as the game.

On the surface the idea seems plausible. Take *Tomb Raider* out of its historical context, add monsters, sci-fi blasters, and magic. Not very original, but there are possibilities there. The problem is in the execution. You buy into the shifting camera angles and tricky control interface in *Tomb Raider* because the puzzles are well designed and the environments are interesting. In *O.D.T.* your enemy *is* the environment. You find yourself struggling to maneuver and fighting for control, which keeps you from being drawn into the game.

There are some neat things in the game such as the batwinged familiar that follows the mage around and the spellcasting interface, but in the end this game is a drag. You can choose to play one of four different characters but the game is the same every time you play it, so there wasn't much point to giving players more than one unless they were hoping to add replay value.

Die trying, or better yet, don't bother trying at all.

RATING ★☆☆☆☆





If you think writing for this magazine is all fun and games, remember that we have to play games like *O.D.T.* whether we want to or not

NO ONE CAN STOP MR. DOMINO

Platform: **PlayStation**
Publisher: **Acclaim**
Developer: **Artdink**





***Mr. Domino* is the latest puzzle game oddity to grace the PlayStation — different and frustrating, but addictive**

As the library of PlayStation games grows more and more diverse (read: bizarre) with the explosive growth of the system's installed base, along comes Artdink's latest, *No One Can Stop Mr. Domino*. Though it has a mouthful for a name, the game's concept is a little easier to manage, but no easier to master. Players control a cutesy, mascotlike character through six obstacle-ridden courses by setting up dominoes to trigger switches, which, in turn, cause all sorts of strange events.

The courses run the gamut from a casino tabletop to a houseful of accident-prone family members (two points for the black humor in that stage), and when Mr. Domino runs out of stamina or time, the level is over and you must begin again. Though the concept appears simple, the game itself is both frustrating and rewarding.

Setting up string hits by linking dominoes from one "trick site" to the next will result in a higher score. In turn, a high score gives you more chances to restart levels after you've failed a number of times. Also, after playing through the entire game, you'll open up new characters that possess different attributes and put a different spin on the same six courses.

Although at first glance *Mr. Domino* may be mistaken as a game for younger kids, the learning curve is considerably high, severely limiting the game's accessibility to younger gamers. But for puzzle-savvy players, the combination of technique, luck, quirky surrealism, and clever designs in *Mr. Domino* gives the game just enough of a hook to incite addiction.

RATING ★★★☆☆

DELTA FORCE

Platform: **PC**
Publisher: **NovaLogic**
Developer: **NovaLogic**

NovaLogic has made its mark by crafting helicopter, tank, and jet sims. Now the company has turned its attention toward squad-level combat.

Delta Force is the latest in a class of first-person shooters that simulate death by a single bullet. However, this game won't be challenging *Rainbow Six* anytime soon for realistic combat. Role playing the Army's elite counter-terrorist unit is mostly an excuse to run around out in the open with assorted weaponry and blow up things. The missions are constructed so that accomplishing your goals often means racking up an unrealistically high body count, and the AI is as weak as the mission structure.

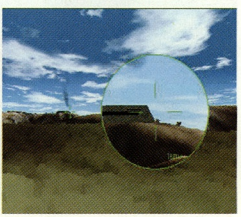
The computer-controlled team members are practically worthless, and scoring a hit on the enemy AI merely requires a bullet to pass in the vicinity. Missions all tend to play out the same, regardless of the objective, and they ultimately end up fairly boring.

Despite the inadequate standalone play, however, *Delta Force* shines in its multiplayer modes. No other game can deliver the chaos of battle like *Delta Force* when the opponents are human. Hit bubbles are gone, requiring accurate shot placement. Having situational awareness is paramount because human snipers often circle back behind you. Confusion and panic actually sets in when someone charges your base, killing everyone in sight. A variety of game options, such as Team Deathmatch, Capture the Flag, and King of the Hill are available on the always-crowded 32-player–capacity NovaWorld servers. The latest patch also offers a matchmaking service, providing links to public rogue servers as an alternative.

Though *Delta Force*'s standalone play is often uninspired, the multiplayer is one of the most satisfying gaming experiences available today.

RATING ★★★☆☆





If you play with friends, *Delta Force* is worth a look. If you play alone, pass on it

WARHAMMER 40,000: CHAOS GATE

Platform: **PC**
Publisher: **SSI**
Developer: **Random Games**

Chaos Gate is a sci-fi war game set in the distant future, with turn-based tactical squad-level battles. Sound familiar? It should. The *Warhammer* series has been around a long time, and many of today's strategy games grew out of it.

Based on the popular paper-and-pencil games of a few years back, the *Warhammer* games deal with the conflict between warring legions of Space Marines after an insurrection. Several Space Marines turned traitor and joined Chaos and are now trying to enslave the universe. It's up to the remaining true-blue Space Marines to stop them.

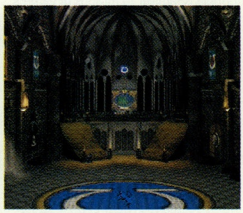
The fantasy war setting may sound unremarkable, but the fighting units are not. The good-guy Ultramarines wear bizarre armor and carry a boggling mixture of futuristic firepower and medieval close-combat weaponry. You can fry the bad guys from a distance with bolters, flamers, plasma guns, and missile launchers, or you can close in with swords, daggers, axes, and lightning claws. The game's 15 scenarios, which can be played individually or as a campaign, offer plentiful action in jungles, cathedrals, cities, open countryside, and enemy fortifications. Because you're dealing with five-man tactical squads, most of the maps are modest in size.

The game has a simple interface. Early missions are relatively easy, but they get tougher as you advance through the game. The trick is to outfit individual members of your squad to handle all eventualities. In the Campaign mode, your squads gain experience and abilities with every mission, so take care of them.

If you're hooked on realtime strategy, *Chaos Gate* will disappoint you. But if you still get a kick out of turn-based games, this one has all the trimmings.

RATING ★★★☆☆





The latest in the *Warhammer* series, *Chaos Gate* isn't terribly innovative, but it's still challenging turn-based strategy

HERETIC II

Platform: **PC**
Publisher: **Activision**
Developer: **Raven**

With *Heretic II*, Raven Software opted for a rather bold step and used a third-person camera even though it still uses the *Quake II* engine. This single decision has positively affected the entire design of the product and distinguishes it from the glut of first-person shooters hitting the stores this season.

The Raven team has done their homework, and the visuals in *Heretic II* are spectacular. It would be silly to say that graphics can carry a game, but they go a long way toward creating a favorable first impression, and we can say this: Prepare to be impressed.

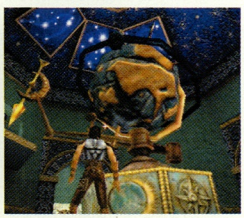
This lush third-person world draws you in immediately. And while the storyline isn't epic, it is crafted in a way that allows new players to immediately be involved in the series, yet it has enough continuity with the original game that *Heretic* fans will also be delighted.

Once the game gets started however, its most nagging design problem comes to light: *Heretic II* falls back on the old "find the key, open the door" formula. This was OK in the days of *Doom* and *Quake*, but *Half-Life* has raised the bar, making this seem like a step backward. Sure, blasting lots of enemies is fun, as is navigating treacherous areas, but there's never any real control of your destiny as long as you follow the path. If anything, this keeps *Heretic II* from being a brilliant action adventure game and lowers it to an excellent third-person shooter.

Heretic II has a lot going for it. It easily earns it space on the shelf with the heavy hitters this season, but it also serves as a reminder to all that every aspect of game design needs to be pushed if you want your project to truly stand out.

RATING ★★★☆☆

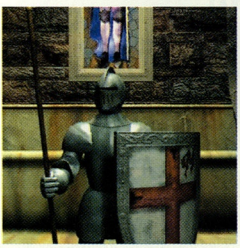




While *Heretic II* is gorgeous and offers a third-person perspective, it follows too close to tradition to stand out

JOHN SAUL'S BLACKSTONE CHRONICLES

Platform: **PC**
Publisher: **Mindscape**
Developer: **Legend**



***Blackstone Chronicles* looks pretty and can get creepy, but it doesn't offer anything new to the adventure genre**

John Saul wrote six novels called the *Blackstone Chronicles* about Malcolm Metcalf, a monster who ran the Blackstone Asylum, and the terrible things he did to his patients and his son, Oliver.

And while the books sold 6.5 million copies worldwide, that wasn't enough for Saul. Now he's brought his tangled world to computers. The game starts where the books left off. It's five years later, and Malcolm is dead, but his ghost has kidnapped Oliver's son, Josh, and spirited him off to Blackstone. Oliver must return to the empty asylum and find his boy.

That's where you come in. Your job is to prowl through the dark asylum, talk to troubled ghosts, recover their favorite possessions to enlist their aid, and solve a few brainbusters. Along the way, you'll encounter the methods of legalized torture used in mental facilities for many years (electro-shock, hydrotherapy, lobotomies, and other ugly treatments). But don't tarry — you've got to get the kid out before dawn.



Blackstone Chronicles is a visual treat, with nice creepy atmosphere, but the game is exceedingly linear. There are puzzles that can't be solved until you talk to just the right ghost in just the right order. Some puzzles are inventory based, while others are timed. Still, many of the puzzles are pretty easy, and clues come flying at you from all directions, just in case you're dense.

Even with the horror setting, the game may not have enough emotional charge to hook most players. And the subject matter is very mature, ruling it out for younger kids. Still, it's a good story with enough spooky flavor to keep adventure fanatics entertained.

RATING ★★★☆☆

KING'S QUEST: **MASK OF ETERNITY**

Platform: **PC**
Publisher: **Sierra**
Developer: **Sierra Studios**

The *King's Quest* series is one of the most venerable and respected properties in computer games and the formula is familiar to millions of gamers around the world. However, this latest installment is a radical departure from its earlier incarnations.

The game is presented as a full 3D environment from a third-person perspective, and as such suffers from many of the same camera placement problems that have plagued designers since Lara Croft first hit store shelves. Fortunately, Sierra Studios has given the player complete control of the camera, allowing them to swing the camera a full 360 degrees, even while the player is moving. The 3D characters exhibit a high degree of articulation and detail, and while buildings and terrain are a bit more nondescript, they're still individually identifiable.

Control is easy to master using the keyboard to navigate and the mouse to control the camera and manipulate objects. In fact, it's remarkable how much of the series' point-and-click adventure gameplay has been retained. The usual inventory bar across the bottom of the screen is still there, and a click on the weapon box equips a sword or axe, readying the character for combat. The switch to 3D has, however, added some "physical" challenges — jumping, climbing and so on — to the puzzle-solving ones, and the two styles mesh with varying degrees of success.

Overall, *King's Quest* fans will be interested because *Mask of Eternity* does carry on the mythology set out in earlier games, but the switch to 3D hasn't really enhanced the basic puzzle-solving element that is the cornerstone of this and earlier titles. That may be good enough for the series' legion of fans, but it doesn't really break new ground in the adventure genre or offer anything you can't find in similar titles like *Redguard*.







***Mask of Eternity* adds a third dimension, a new direction for the *King's Quest* series**

RATING ★★★☆☆

DARK SIDE OF THE MOON

Platform: **PC**
Publisher: **SouthPeak Interactive**
Developer: **SouthPeak Interactive**







SouthPeak's *Dark Side of the Moon* is better than its previous *Temujin*, but that's about it

Dark Side of the Moon is a sci-fi adventure game that combines a rich visual experience using SouthPeak's Video Reality system (translation: tons of FMV) with a detailed story and hours of gameplay on six CD-ROMs.

You are Jake Wright, heir to your uncle's small mine on Luna Crysta, the ninth moon of a planet in the Cepheus system, and you've arrived to claim it. There are huge mines here, run by a powerful corporation, and the Luna Crysta population is rough and unruly, a lot like the Old West. You must survive the frontier environment, outsmart your greedy sister, locate your uncle's mine, and find out who caused his death. Along the way, you might save the indigenous Cepheids who have been forced into slavery by the mining company that runs the moon.

The mouse-driven game is easy to learn, and there's a built-in hint system. You also get 360-degree vision most of the way. Some players won't appreciate so much full-motion video, but the acting is passable and the sets are interesting. The biggest knock is the image size; once you add the inventory, options menu, communicator, and conversation window, the action is reduced to about a third of the screen.

It's not bad for an adventure game with FMV, but that really isn't saying much.

RATING ★★☆☆☆

GANGSTERS

Platform: **PC**
Publisher: **Eidos Interactive**
Developer: **Hothouse Creations**



***Gangsters* is the most offbeat business sim we've ever seen — and it's cool, too**

Only on a PC, where you can keep meticulous records and randomize data sets, could you make a hardcore strategy game like *Gangsters*. It is kith and kin to Sid Meier's *Civilization* and *Master of Orion*, it's *Syndicate* for the *Civ* set, *Chaos Lords* done right. It's steeped in the gripping but seldom-used imagery of the Prohibition era, but what really carries the game is its design, a (for the most part) well-implemented blend of turn-based and realtime decision-making, a mix that allows for both planning and tension.

Players accrete power through pure resource management, ordering teams of gangsters to extort from neighborhoods, collect protection money, rob stores, kill opponents, bribe politicians, open casinos, and guard whorehouses. These orders are given during the turn-based phase, then your commands are executed in realtime across what is basically a *SimCity* landscape. Keeping the real-time phase lively is the eruption of combat, as you fight both the cops and rival gangs for control of the streets.

Gunfights happen in an isometric, 2D landscape, with a pause option for new orders. But there's no dexterity involved in winning a gunfight, only the challenge of being able to afford to field enough mobsters with tommy guns to win the fight in the first place, since at heart *Gangsters* is a business strategy sim. What matters is how much turf you control, how many gin mills your run, how many judges are in your pocket, and how many Machine Gun Kellys you have on your payroll. And where games like *Entrepreneur* and *Capitalism* have worked in the past strictly as business sims, *Gangsters* steps it up a notch, with tougher, bloodier gameplay.

While there are some interface problems, a few design holes, and a sketchy manual, once players master the complex game interactions, *Gangsters* becomes exactly what fans of this genre look for — something that keeps them up late at night. This is an excellent debut from Britain's Hothouse Creations, a group of refugees from Microprose UK. Keep an eye on this team.

RATING ★★★★☆

UPRISING 2: LEAD AND DESTROY

Platform: PC
Publisher: Cyclone
Developer: 3DO



***Uprising 2* is every bit as good as the original. In some ways, it's better**

The original *Uprising* (**NG 27**) blasted onto the scene with some of the most original and innovative gameplay anywhere. Now, with *Uprising 2*, Cyclone can no longer really use the words "original and innovative" anymore, but they have still managed to turn out one hell of a game.

Those who are familiar with the first game will immediately be familiar with everything the sequel has to offer. In fact, it's difficult to pick out major differences between them. You still pilot an armored tank called a Wraith through large-scale battlefields while commanding the army around you. Gameplay requires you to use your twitch skills to pilot the Wraith and support your units as well as your brain to plan and implement the strategies of the army.

If it all sounds like it might be a little overwhelming, that's because it is. The sheer amount of controls you will need to memorize to be successful are staggering, and only practice will allow you to get comfortable with everything you need to know. The game is balanced to help you get into the swing of things right from the start with a practice mode as well as a few newbie levels so that you can learn the necessary skills. Once past the first levels, get ready because the difficulty curve ramps up quickly but the game is so fun and engaging that you will welcome the challenge, even if it takes a couple of tries to figure out each level.

Unfortunately, *Uprising 2* brings with it few real enhancements over the first. As can be expected, there are new weapons, a much improved tech tree, some eye-popping visuals (only accelerated for 3Dfx, however) as well as a better learning curve which allows the game to be a bit more accessible. As a game it qualifies as being better than the first which is quite an accomplishment, but it fails to really break any new ground, which is a shame. Still, it packs enough fast action, deep strategy, and overall intensity to please any gamer, and that's what really counts.

RATING ★★★★☆

STAR WARS: ROGUE SQUADRON

Platform: Nintendo 64
Publisher: LucasArts
Developer: Factor 5/ LucasArts



Putting it simply, *Rogue Squadron* is what *Shadows of the Empire* should have been

Let's get this out of the way first: There's also a PC version of this game, and frankly, it's awful. This game was designed from day one to run on N64, and a PC port was a mistake — small textures became smeared out of recognition on a high-resolution monitor and there are serious issues with framerate and control on less-than-top-of-the-line machines.

That said, when played on the system for which it was designed in the first place, *Rogue Squadron* is a fine game. The first to market with support for the 4MB RAM Expansion Pack, *Rogue Squadron* in high-resolution is a feast for the eyes. Wispy skies, subtle-colored lighting, and detailed ship models all work together to immerse players in a convincing *Star Wars* universe.

At its heart, *Rogue Squadron* is an extension and expansion of the best mission from the disappointing *Shadows of the Empire*, the Hoth level. Here, flying and fighting is the name of the game, and *Rogue* lets you battle the Imperial menace in all manner of Rebel craft, including X-Wings, Y-Wings, A-Wings, the Speeder, and the V-Wing (which looks suspiciously like a Cylon Raider from *Battlestar Galactica*).

At first, flying in the game seems a bit slow. But as players fight their way through the story-connected stages, it's obvious that there's so much going on in some of the missions, a faster pace would either cause players to miss the atmospheric touches or be too difficult.

For replay value, Factor 5 is relying on players earning medals for their relative performance, and for the most part the ploy works. The better you were, the more likely you are to earn a gold medal; lesser performances garner silver and bronze. Later in the game, certain combinations of medals will unlock new, secret ships.

It's not the most compelling reason to keep players coming back, but mission-based games have never stressed replay value anyway. It's more about the experience along the way, and in that arena, *Rogue Squadron* delivers in spades.

RATING ★★★★☆

BATTLETANX

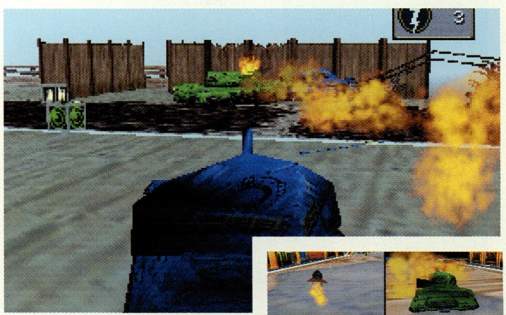
Platform: Nintendo 64
Publisher: Studio 3DO
Developer: Studio 3DO

You have to give it one thing, *BattleTanx* has a pretty bizarre backstory. This particular post-nuclear holocaust world has it really bad: A virus has wiped out almost all women, who are so rare and precious they're referred to as "Queen Lords," and wars fought by roving gangs armed with tanks are literally waged over them. Hmmm. Anyway, the emphasis here is on action, not story, so as oddly disturbing as the plot is, it can safely be ignored because the action is well worth checking out.

Although the game is in realtime 3D, it initially reminded us of some of the more frenzied shooters of the 16-bit era. The pace is relentless, with numerous enemies shooting at you from all directions; sometimes it's all you can do to simply hold down the fire button and pray you can inflict enough damage to survive. Your main battle tank is surprisingly nimble, and the power-ups it uses range from swarming missiles (useful), to lasers (powerful but dull), to a nuclear warhead (blows up real big). Although not exceptionally creative in their design, most of the weapons at least look cool, and manage a few flashy special effects along the way.

As you fight your way from New York to San Francisco, you'll also pick up a small army of your own, friendly tanks which will follow you into battle as you try to "rescue" other gangs' Queen Lords (although "collect" is a more honest term). The majority of buildings and structures can be destroyed, the polygons folding in on themselves — it's a neat trick, but it works better for large buildings than small ones, and it gets repetitive.

Even with 17 levels, the one-player Story mode is a trifle short (set to Easy, we beat it in a scant six or eight hours), but there are a wealth of multiplayer options, and it offers a type of combat which is as yet unavailable for N64. It's fast, controls well, and it's got tanks blowing up everything in sight — sounds good to us.





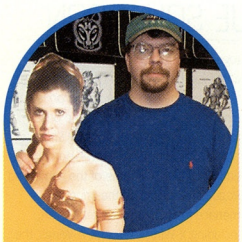
***BattleTanx* has the strangest backstory we've ever heard, but the gameplay is no joke**

RATING ★★★★☆

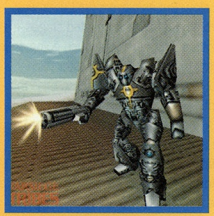
STARSIEGE: TRIBES

SYSTEM: PC **PUBLISHER:** SIERRA **DEVELOPER:** DYNAMIX

INTERVIEWED: **SCOTT YOUNGBLOOD, LEAD DESIGNER**



SCOTT YOUNGBLOOD
Lead Designer









Next Generation: Do you have any tips or hints for someone playing *Starsiege: Tribes* for the first time? What kind of strategies do you suggest for the overall game?
Scott Youngblood: Jet Pack, Jet Pack, Jet Pack, Jet Pack. Learn it, master it. Being able to use it effectively can save your life and help you get the upper hand on an enemy tribesman.

Tribes can be played at many levels. Find the one that you like the most and master it. Personally, I like to play defense and stay back at the base, making sure the enemy tribe doesn't come in and destroy all of my precious inventory stations. Solid defense is often the difference between victory and defeat.

Play as a team. Unlike many of the other FPS games out there, *Tribes* lends itself to team play. Many of the features are geared toward players coordinating attacks and defenses. Working together to achieve the mission goals makes the game a much more rewarding experience. Besides, getting four of your heavily armored *Tribes*-mates into an APC and attacking the enemy as a team is just plain cool!

NG: What section of the game do you find most difficult? What's your strategy for getting past it?



There are many good players on the development team and in QA. In *Tribes* you can't win if everyone is playing as a single player

SY: We've designed several different modes of play that range from no-team deathmatches to highly strategic "defend and destroy" missions where team play is a must. The goal of these missions is to infiltrate the enemy tribe's base and take out key equipment. The bases can be difficult to attack using only a single tribesman, so the key is to coordinate attacks from multiple directions, hitting key equipment first.

For example, one mission (Bloody Vengeance) has several turrets on the base walls. Taking out the turrets first will require quite an effort, but if you first take out the solar panels (which provide power to the turrets) destroying the turrets will be much easier.

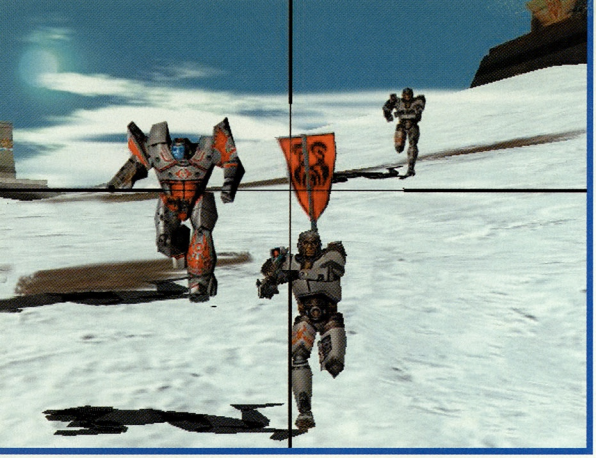


Jet Pack, Jet Pack, Jet Pack. Learn it, master it. Being able to use it effectively can save your life

Team coordination is key. And the key to team coordination is having a commander who understands the mission and can effectively direct their tribe.

NG: Which team member is the best at the game?
SY: That's difficult to say. There are many good players on the development team and in QA. In *Tribes* you can't win if everyone is playing as a single player. Players need to assume all the responsibilities of the mission or you'll lose against a better-organized team. Some team members excel in certain areas — some are great at defense, while others are great at offense. We haven't had an internal "King of the ring" contest yet — we've been too busy trying to finish the game.

NG: Have players discovered strategies you never expected for the game? Which ones have surprised you most?
SY: I haven't seen anything yet that has made me say, "Whoa, I had no idea that was possible." But I'm sure that will happen once the game is released to the public. *Tribes* has a huge depth of strategy, and each of the missions



When you know that an enemy is hot on your tail and you're trying to maximize your use of the terrain — nothing beats that adrenaline

is varied enough that eventually tribes will develop strategies specific to them. Some strategies will be more successful against certain tribes and less successful against others. It's kind of like playing football: If you pick the right play, you get a touchdown; if you don't, you get a sack and possibly a fumble.

NG: Are there any cheats, tricks, codes, or debug insights in the game that were added for personal reasons? What are they and how do they relate to the team?

SY: There aren't too many Easter eggs in the game. For the most part, we resisted the urge to spend development time putting in fun stuff that wasn't part of the core game. Personally, I would like to have seen an Eric Cartman player voice set, "Kick ass …." There are probably things in there I don't know about that will surface after we ship.

NG: Are there any programming artifacts left in the game? Not bugs, but unanticipated features?

SY: There are a few "unanticipated features." They happen when players combine equipment to do things that we hadn't originally anticipated. For example, the Heavy Armor player is very heavy and slow, but it can take the biggest weapon in the game (Mortar) and fire it a few feet in front of itself. The player can then run toward the explosion, jump, and jet right as it explodes. If the player times it right they can propel themselves great distances in the air (taking some damage from the blast, of course). This is similar to the rocket jumps in *Quake* (but with much more travel distance). We didn't intend that to happen, but in the course of making explosions propel players in a given vector it just came out that way.

Another cool feature is piling more players on an APC than the amount it was designed for. It's kind of like cramming as many people into a Volkswagen Bug as possible. The displacement code (objects pushing players) made it possible to overload the APCs. It's still a pretty tricky maneuver to pull off without killing your teammates, though.

Every gamer out there has experienced those "Wouldn't it be cool if the game did this" ideas. When you're making games and you can make those ideas happen — that's the best!

NG: What was the original concept for the game? How closely does the end product match it?

SY: The game was always going to be a kick-butt multiplayer game. Initially, it didn't have the team emphasis that it does now. This gives it something unique in the world of first-person shooters.

NG: What games influenced the design of Tribes? What games are you currently playing?

SY: The original game that sparked *Tribes* development was *Doom*. We all played and loved it. Every gamer out there has experienced those "Wouldn't it be cool if the game did this" ideas. When you're making games and you can make those ideas happen — that's the best! Through the course of playing these games we had those "what if" ideas. Many of those have made it into *Tribes*. But many didn't make it in and will most likely end up in future games.

A few of the dev team members got buried in clan-oriented *Quake* play. [Lead software engineer] Mark Frohnmayer and I even joined a *Quake* World CTF clan called the Evil Midnight Bombers. We competed in several online tournaments and had a blast doing it.

What games am I playing now? None. Every waking hour is spent working on *Tribes*. There are plenty of games I want to play, but I won't crack open the boxes until *Tribes* goes gold. *Half-Life* and the new *Need for Speed* are a couple of the unopened games I have sitting on my desk at home.

NG: What is your favorite moment in the game?

SY: The chase. You've just grabbed an enemy tribe's flag and are trying to get back to your base before getting waxed. The missions in *Tribes* are larger than the levels in *Quake* and *Quake II* and that means there is more time to catch and/or be caught by other players. When you know that an enemy is hot on your tail and you're trying to maximize your use of the terrain — nothing beats that adrenaline. Mark Frohnmayer's office is right next to mine and we've had many games where both of us were screaming in glee and/or terror from the chase.

NG: What ideas for the game ended up on the cutting room floor?

SY: With a game like this there are way more ideas than are humanly possible to put into a single game — or even a couple of games. One of the best examples is water. It might not seem like water is a huge idea in a game; other FPS games have had water in them. But we wanted to create lakes and oceans as well as rivers, and we wanted to make the water more than just a small obstacle that the player has to jump over or swim through; we wanted to make it a key ingredient. One of the original mission ideas took place on islands in the middle of an ocean. Assaulting an island is completely different than anything else done in FPS games to date.

Other things that didn't quite make the cut were ground vehicles (tanks, armored personnel carriers, scouts), alien races, space combat, and a plethora of other weapons.



The game was always going to be a kick-butt multiplayer game. Initially, it didn't have the team emphasis that it does now


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SILENT HILL

SYSTEM: PLAYSTATION **PUBLISHER:** KONAMI **DEVELOPER:** KONAMI

INTRODUCTION

Konami's first venture into the horror genre pioneered so well by Capcom's *Resident Evil* series is turning out to be a completely new take on terror. As opposed to *Resident Evil*'s campy, but spooky, twist on B-movies, Konami's *Silent Hill* takes a decidedly more sinister and surreal approach to horror. The following walkthrough accompanies players through the first sections of the game. The rest of the adventure will be covered in **NG 52**.

THE PROTAGONIST

Meet Harry Mason; your average, run-of-the-mill writer who happens to have a seven-year-old daughter. He's certainly no Chris Redfield or Duke Nukem. But when Harry arrives in Silent Hill, Mr. Ordinary meets the extraordinary. And this is where you come in. Controlling Harry in combat can be a tricky thing. His aim is less than stellar and his supply of ammo is limited, to say the least. So, instead of fighting it out with each enemy you come across, your best chance for survival will almost always be to evade foes whenever possible.

Conserve your ammo for the inescapable foes, like bosses, and use the Notepads (not the First Aid Kits) to replenish Harry's health.

THE ARRIVAL

Your arrival in Silent Hill is anything but average. Reviving from a car crash, you'll notice that your daughter, Cheryl, has disappeared from her seat. Enter the town, and as you peer through the fog, you'll spot the fuzzy shape of a small girl who resembles your daughter. Follow her until you reach an alley. Proceed down the alley, opening each successive chain-link gate. As you continue, the light will begin to fade and day turns too quickly into nighttime. As you near the dead end in the alley, you'll come across increasingly disturbing evidence that all is not quite right in Silent Hill.

As things grow even darker, you stumble across what looks like a human body crucified on the chain link fence. This triggers an all-out attack by a hoard of knife-wielding children. Try as you might, there's no escape, therefore you succumb to the demons and let yourself be killed.

LOOKING FOR CHERYL

When you awake, you'll find yourself in a café in the middle of town. A female police officer will greet you and introduce herself as Cybil Bennett. After a brief discussion with Cybil, she'll leave the Café to find back up. On your insistence, she'll also give you your first weapon, a Pistol. There are 15 bullets in the gun.

Once Cybil leaves, examine the various items strewn about the Café. Pick up the Knife, the Town Map, and the Pocket Flashlight. There is also a Notepad on the counter, which you can use to save your game and replenish your health. You'll notice a red portable Radio on the table near the window, but you cannot pick it up.

Arm the Pistol and approach the exit doorway. A flying demon will break through the window and ready itself for an attack. Kill the demon, then pick up the Radio. Exit the Café and head for the alley on Finney Street between Bachman and Levin where you last saw your daughter.

From the Café, head north on Bachman, then take a left onto Finney. Enter the small alley and dodge the two demon apes by ducking through the chain-link gate to the left at the dead end. Follow the alley until you find a set of papers strewn on the ground. The papers are part of Cheryl's sketchbook. On one of the pieces of paper, **"To School"** is scrawled in blood.

Exit the alley and return to the Café for a breather. Your new objective is to make your way to the lower left-hand section of town where Midwich Elementary School is located. But all streets that reach the school are blocked by massive gaps in the road. Every time you approach one of the gaps, you'll notice that a big red X will appear on the Town Map to indicate a dead end.

So how do you get to the School? Head west down Matheson Street until you reach the dead end. You'll find another set of sketchbook papers lying on the ground. Dodge the demon apes and examine the papers. They provide you with your next set of clues. One of the papers will read, **"Levin St. Doghouse."** Heed the clue and head to Levin Street.

Find the house on the left-hand side of the street that has a doghouse sitting out front. Dodge or kill or the dog roaming the yard and duck into its doghouse to pick up the House Key. Use the House Key to unlock the front door of the house and enter. Inside the home, there's really nothing to find except for a triple-locked door in the back hall and a Notepad on the table. Save your game, then get ready to hit the streets again.

KEYS

You'll need to find three separate keys in order to unlock the door in the Levin Street house. You will find them in the following locations:

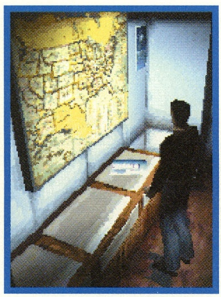
Key of Lion: In the trunk of the police car at the east end of the Finney Street bridge.

Key of Scarecrow: In a mailbox across the gap at the south end of Elroy Street. Use the wooden plank to cross the gap.

Key of Woodman: In a pool of blood on the basketball court in the alley behind the Café. You can enter the alley from the south end that opens on Matheson Street.

Once you have all three keys, reenter the house on Levin Street and use them on the back door. You'll be given access to the backyard and a clear shot to the elementary school in the south of town. Suddenly, the sky will turn dark, and you'll need to use your Flashlight to guide you to the school. The Flashlight is essential for lighting your way, but it's also a dead giveaway for lurking demons hungry for a midnight snack. Exit the backyard through the gate along the fence and you'll enter another back alley.

There are plenty of demon apes and rabid dogs between you and the school, so make a beeline for it and don't look back. Keep running and head straight down Midwich Street until you reach the front double doors of the school.



The School Map is important. Pick it up from the lobby

MIDWICH ELEMENTARY SCHOOL

Once you enter the school, make sure to pick up the School Map from the bench along the left-hand wall. Enter the lobby through the double doors and head to the left. You'll find an empty registration area smeared with blood. Examine the papers on the registration office desks to find new clues.

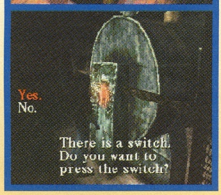
PAPER ONE: 10:00
"Alchemy Laboratory"
Gold in an old man's palm. The future hidden in his fist. Exchange for sage's salt water.

PAPER TWO: 5:00
"Heat wind bearing dark place"
Flames render the silence. Awakening the hungry beast. Open time's door to beckon prey.

PAPER THREE: 12:00
"A place with songs and sounds"
A silver guidepost is untapped in lost tongues. Awakening at the ordained order.







The three puzzles at the school must be completed in a specific order

The room behind the reception area is empty.

Head to the Infirmary down the hall on the right side of the double door entrance. Inside you'll find a Notepad to save your game and replenish your health. The only doors unlocked in the first hall, at this point, are the double doors that lead into the courtyard. Enter the courtyard and run to the far side of the area to avoid the small demons lurking in the dark.

In the back hall, head through the set of double doors and enter the left-hand hallway. The only doors open in this hall are the ones leading to the restrooms, so simply head up the staircase to the second floor.

On the second floor, you'll enter another empty hall filled with doorways. All of them are open, but there's nothing inside any of the rooms. Head through the north hall leading right and quickly scurry past the demon kid and into the first room (on the map). You'll find yourself in a lab supplies room. Search the shelves to find some Chemicals in a bottle. Pick them up and head back out into the hall. Avoid the demon child again and dodge into the middle room, which is the Laboratory. On the middle table there is a severed hand clutching a piece of gold. Use the Chemicals on the hand to receive the Gold Medallion. Make sure to pick up the box of Handgun bullets on the desk near the window as well.

Exit the Laboratory and head through the far right double doors. Head all the way down to the south end of the hall and through the double doors to enter the south hall. There are plenty of demon children running around, so make sure to dodge them as much as possible. Head over to the left-hand side of the hall and enter the last room. Inside you'll find a piano and some bloody notes hanging on the chalkboard.

CLUE

"A tales of notes lost birds"
First flew a hasty pelican,
Rushing for the reward.

Next flew a dandy stork,
Eager to show he could
Fly higher than the pelican.

I forget who came next,
But she only flew
A half flap
Overhead the stork.

Then one came
Next to the dandy.
Just left of him.

Last out came
A raven of low birth,
She yawned and
Lay down for a nap.
The End.

Head to the Clock Tower in the main courtyard of the school and insert the Gold Medallion in the left-hand slot to the side of the locked entrance. Return to the Piano Room and the cover on the keys will now be lifted. Play the following notes in order: (Note that there is no sound when pressing these keys.)

1) D
2) A
3) B-flat
4) G
5) C-sharp



Once you finish the silent composition, the Silver Medallion will drop from above the blackboard. Retrieve it and head to the Clock Tower, once again. Insert the medallion in the right-hand slot near the entrance to the tower and the clock face will read 5:00. Head to the school Basement and enter the Generator room.

The red button on the main generator will now be working. Press it and exit the basement altogether. Now head to the Clock Tower and the door leading inside will now be open. Enter and climb down the ladder. Walk through the lower portion of the tower base and climb the ladder at the far end. Exit the Clock Tower and a scene will follow.

THE SCHOOL NIGHTMARE

Once you emerge from the Clock Tower, you'll notice that there's something different about the school. It has completely changed its appearance, now containing rusted hallways with chain-link walls. The map from the first layout of the school still works, but the route to explore the building has changed. Head through the north double doors in the courtyard and immediately go through the upper left door (the side double doors are locked).

Once inside, pick up the Rubber Ball on the rusty table. Exit the room and head to the right-hand door in the hall. Once you enter the room, you'll notice that it's completely empty and cavernous. Continue your search by exiting the right-hand door in the room that leads into the right hall on the first floor. Enter the first door along the right-hand side and pick up the yellow Picture Card on the table.

Your next move is to head to the Reception Area, and quickly dodge into the back room to avoid the looming presence of two demon children in the hallway. In the back room behind the Reception area, examine the odd-looking door between the two hanging corpses. Insert the Picture Card to unlock it. Move through the door into the left-hand hallway on the first floor.

Once inside the new hallway, duck into the door to the boy's bathroom. Examine the stall and pick up the Shotgun inside. There is also some bloody graffiti on the wall inside the stall that reads, **"Leonard Rhine The Monster Lurks."**

What does it mean? You don't know yet, so exit the bathroom and continue down the hallway. Your main objective is to get to the south hall of the second floor, but getting there has been complicated by new walls that block the passage along some of the side halls and the staircases. Make your way to the Locker Room. The Locker Room is located through the bottom right door in the south hall on the second floor. To get there, you'll need to weave in and out of classrooms in order to reach the door.

Once inside the Locker Room, a footlocker will be rattling. Open it and there will be nothing inside but blood. But once you attempt to walk back to the exit, a body will fall out of one of the tall lockers along the back wall. Examine the body to pick up the Stack Room Key. Pocket the Key and make your way to the Stack Room which lies just through the door to the right of the Laboratory in the North Hall on the second floor.

Find and read the open book on the side shelf.
"Monster Lurks is a book title."
Chapter 3: Increasing Delusion.

Poltergeists are among these. Negative emotions, like fear, worry, or stress manifest into external energy with physical effect. Nightmares have, in some cases, been shown to trigger them. However, such phenomena doesn't appear to happen to just anyone. Although it's not clear why, adolescents, especially girls, are prone to such occurrences.

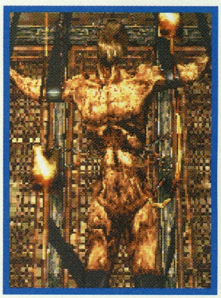
After reading the chapter, continue your search for Cheryl by entering the next room through the right-hand door in the Stack Room. Read the open book lying on the wooden table:

Hearing this, the hunter armed with bow and arrow said, "I will kill the lizard." But upon meeting his opponent he held back, taunting, "Who's afraid of a reptile?" At this, the furious lizard hissed, "I'll swallow you up in a single bite!" Then the huge creature leapt forth, jaws open wide. This was what the man wanted. Calmly drawing his bow, he shot into the lizard's gaping mouth. Effortlessly the arrow flew, piercing the defenseless maw. And the lizard fell down dead.
... This is from an old fairy tale, I remember reading it when I was a kid.

Time to hit the rooftops. Take the upper northeast staircase to reach the third-floor rooftop. Use the Rubber Ball to plug up the drainage pipe in the far right-hand corner of the gutter, then examine the other drainage pipe near the bloodied stone bench along the side of the rooftop. You'll notice a Key inside the pipe just out of your reach. Turn on the water valve near the water tower. This will flood the gutter and flush the key down the pipe to somewhere far below. Head to the Courtyard on the first floor.

Once you reach the Courtyard, notice that the grass below the drainage pipe to the right of the unlocked double doors has formed a small puddle containing the Classroom Key. Pick it up and head to the second floor. In the right-hand hallway, use the Classroom Key on either accessible door. Continue through the far door to reach the second Classroom. Exit out into the lower half of the right-hand hall and find the staircase leading down (First Aid Kit on the bench in the hall).

Make your way down to the Basement. Head through the left-hand door at the bottom floor to pick up three boxes of Handgun Ammo. When you're well stocked, head through the right-hand door and approach either of the valve wheels on the pipes alongside the center opening. Your objective is to turn each one so that the spiked turnstiles in on either side of the opening will clear a passage. Take a deep breath — then enter the first boss room.

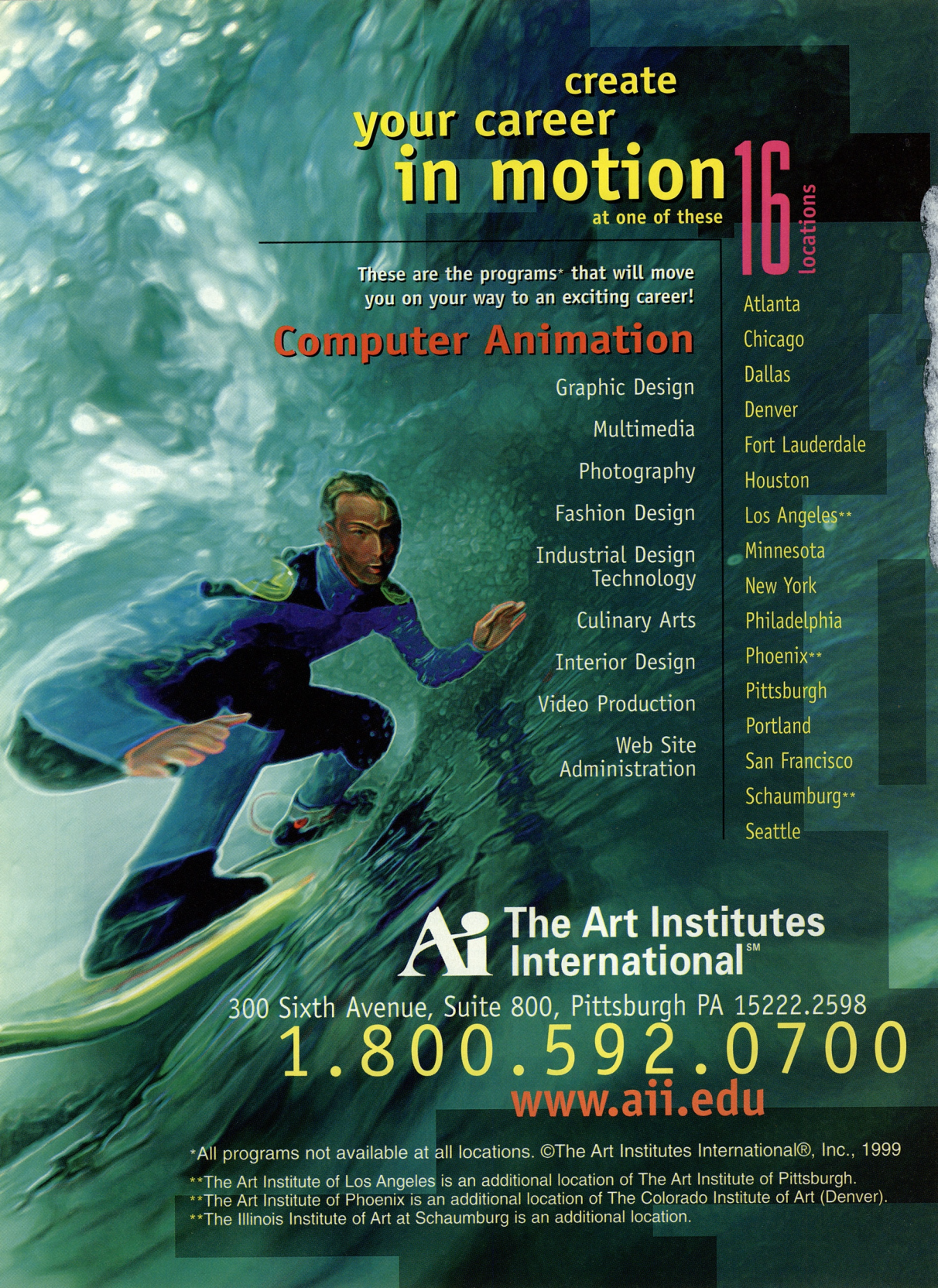


A little exploration leads you to this corpse





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ENDING

System Shock



Following the success of its Vic-20 home computer, Commodore Business Machines released the Commodore 64 in 1982. While the low-cost computer was an instant hit, many history books fail to mention the lasting contribution the computer made to the videogame industry.

Its 64K RAM was a huge amount at the time, and with custom sound chips the C64 was an integrated masterpiece. Top musicians gravitated toward the machine for its high-quality sound while digital artisans eagerly took advantage of its 320 x 200 high-resolution graphics. Within months a huge scene was created and many companies took advantage of the momentum by creating hardware for video capturing, sound digitizing, and expanding system functions. In its final years, an excellent GUI, Geos, was even released for the system.

But the real story was games. Jack Tramiel's greatest triumph was the videogame industry's worst nightmare. The machine easily surpassed the current home console systems. On top of that, the games were very well produced (and, importantly for the success of the system, if not developers, easily bootlegged). The success of the machine has been blamed as a contributing cause for the decline of the videogame industry, but the C64 was the proving ground for many of today's top game developers and publishers, a list which includes Psygnosis, Rare, and DMA Design.

Even as we approach the millenium, former C64 users still duke it out in bitter rivalries with former Apple and Atari home-computer loyalists. Which was the best? **Next Generation** knows better than to answer that question.

WHAT EVER HAPPENED TO?

CONAN
Apple II
Data Most's single-screen scroller didn't tie into its license very well (it's pretty hard to make a 16 x 16 shape table look like Schwarzenegger), but it did provide excellent action, and "3D" gameplay — players could walk behind columns.



Retroview

by **Steven Kent**, author of a forthcoming book on the history of videogames

THE BOYS FROM THE DARKSIDE — PART 1

I have conducted more than 400 interviews while compiling information for my upcoming book, and only one person has utterly refused to cooperate — Sam Tramiel, the last president and CEO of Atari Corporation.

I called Tramiel at Atari more than 100 times, but he never agreed to speak with me or returned my calls. One time he happened to pick up one of my calls in his secretary's absence. I asked for an interview, and he responded by saying, "What do I get out of it?"

Despite the dozens of horror stories I have heard about Sam Tramiel and his family's business practices, I confess I admire the Tramiels. The following is a pared-down version of their story.

When people talk about the Tramiels, more often than not they are referring to the family patriarch Jack Tramiel.

Jack Tramiel is a true American success story — a Polish Jew who survived a Nazi concentration camp, came to America, and worked his way from poverty to fortune.

After being liberated at the end of World War II, Tramiel moved to the United States, joined the Army, and learned how to repair typewriters. He saved his money, and opened a typewriter repair store in the Bronx in 1954. In 1955, he moved to Toronto, founded Commodore International, and won a contract to assemble typewriters for a foreign firm.

In a few years, Commodore began manufacturing its own adding machines. Tramiel had an eye for catching trends. Realizing that calculators would replace electromechanical adding machines, he set up a partnership with Casio in the 1960s. By 1969, Commodore owned its own calculator manufacturing plant.

In 1976, Tramiel purchased a small chip manufacturer named MOS Technologies for $800,000. This was Tramiel's biggest break. MOS made the 6502 microprocessor, the chip that would become the heart of the Apple II, Atari 400, and Atari 800 computers.

Tramiel, and later his sons, entered the computer business with cutthroat East Coast business techniques that earned them enemies throughout the computer industry. Around Commodore, he referred to his business philosophy as "the religion." Executives who were unprepared — or unwilling — to practice Tramiel's religion quickly found themselves unemployed.

Tramiel had an explosive temper. He was known for pounding desks as he spoke, yelling at employees, and conducting mass firings. *California*

QUESTION

What classic Atari arcade game featured airplanes and reverse Breakout gameplay with a two-player simultaneous mode? Hint: It was quickly adapted to Atari 2600.

Wolfenstein 3D

Ask anyone to name the most influential title of all time, and odds are that *Wolfenstein 3D* will come up. Game designers had flirted with the concept behind *Wolfenstein* (with relatively little success) since the days of 16K home computing: Create a realistic 3D environment to negotiate, and give players an ever-increasing arsenal of weaponry to play with.

Pre-*Wolfenstein*, claims of authentic first-person 3D environments had proved disingenuous, and it fell to John Carmack (programmer) and John Romero (designer) to showcase the kind of fast, immersive game environments that were finally possible using a then-state-of-the-art 386 processor. Although the game's simple ray-casting engine seems primitive in retrospect, in the prepolygon days of 1992, it was graphic perfection.

Marketed via Apogee's shareware model, it was immense technological leap from Apogee's previous releases such as *Commander Keen*, yet retained those titles' strong characters and sense of comic violence, *Wolfenstein* laid the PC's "strategy and flight sims" reputation to rest.

Without *Wolfenstein 3D*, there certainly would not have been *Doom*, and the 3D revolution that swept the game industry in the mid-1990s certainly would not have happened as fast as it did. While *Quake* certainly is the result of Carmack and Romero's earlier work on *Wolfenstein*, the timeline of games that grew to include *Tomb Raider* and *Mario 64* would have looked much different if it were not for the small band of shareware coders at Id.

System	PC
Publisher	Apogee
Developer	id Software
Released	1992



The rotating barrels of the chaingun (right) proved popular enough for the weapon to appear again in *Doom* and *Quake II*. By using bitmapped enemies, *Wolfenstein* was able to pack rooms with action (above left)

magazine once listed him third on a list of "Bosses from Hell."

I have seen that he has a sympathetic heart. But usually, when it came down to a business decision, the easy answer was to just let people go. He had no remorse and no second thoughts about making it happen swiftly and promptly.

Don Thomas, Former Atari Employee

Tramiel eventually converted Commodore from a calculator maker to a home-computer manufacturer. Fond of telling his employees, "We need to build computers for the masses, not the classes," Tramiel bullied his engineers to find cheaper ways to manufacture components and stripped costly luxuries from products. When Commodore unveiled the Pet Computer in 1977, it was the first home computer to retail for under $1,000.

In 1981, Commodore released the VIC-20, a home computer that came with 5K of RAM and 16-color graphics and sold for under $300. It was a pricing coup for its time.

While Atari faltered at the end of 1982, Commodore sold more than 800,000 VIC-20s worldwide. In August, 1982, Commodore launched the $600 Commodore 64 (C64), a personal computer they claimed rivaled the $1,000 Apple II.

As the videogame market crumbled, C64 sales continued to build, propelling Commodore into practically unheard of financial success. While building his empire, however, Tramiel developed a reputation for attacking enemies and betraying allies. While he was never indicted, he was embroiled in a Canadian banking scandal, and he was notorious for withholding payables from vendors who were foolish enough to trust him.

Commodore did their usual Jack Tramiel stunt — not paying the bill. If your guys are dumb enough to keep shipping him product, he lets them keep shipping. Soon Commodore owes them so much money that they run out of cash and find themselves out of business. At that point, Commodore comes in and buys the company, then forgives its own debt.

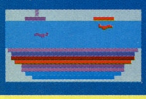
Al Acorn, Former Atari Vice President

On January 10, 1984, Tramiel had a cataclysmic disagreement with Commodore's board of directors. Three days later, he resigned from the company. But within six months, Tramiel purchased Atari from Warner Communications with $240 million in promissory notes.

Next Month: The Tramiels get ready to give the videogame industry a lesson in cutthroat business practices that would propel Atari to new heights and ultimately prompt its downfall. NG

ANSWER

Canyon Bomber.



Letters

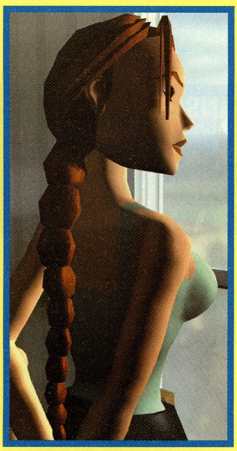
Write makes might

Next Generation's review of *Tomb Raider III* came as a pleasant surprise, particularly in light of your self-confessed predisposition to give the game a low rating. I was pretty sure the crew at **NG** had a nice, comfy seat on the "Lara Backlash Bandwagon" that had been gaining steam since the announcement of *TR III*'s release. I'm glad you proved me wrong, but nonetheless, it's true that many members of the gaming press unfairly bashed the game long before it hit the shelves.

Like others in the gaming community, I believe most of the negative publicity surrounding *Tomb Raider* is due to a media backlash brought on by overexposure of the game's star character, Lara. Ironically, it's the media itself that's primarily responsible for this overexposure it's rebelling against.

Sadly, as anyone who has had prolonged experience working with the press can tell you, this comes as no surprise. The press is notorious for building up an icon only to ruthlessly tear it down later. I own all three *Tomb Raider* games, and each game is a blast to play. *TR III* is easily the best of the series. The graphics look much better and the gameplay is up a few notches too. It's true the game hasn't been completely overhauled but it is better. Lots of the improvements are subtle but when you add all the little changes together, *TR III* offers an experience beyond both previous games. Anyone looking at the game with an objective eye can see this. Since your review of *TR III*, I believe the staff at **Next Generation** definitely has that objective eye. Consequently, I'll have more faith in your game reviews.

Reggie Reed
Greed13369@aol.com



We like Lara, so we put her on the cover. So there

And in the other corner ...

Will you please stop putting Lara on the cover of your magazine! It has been happening too often lately. You game magazine editors really need to get a life. *Tomb Raider I*, *II*, and *III* are pretty bad games. The control is horrible compared to other 3D games — *Mario 64*, *Crash*, *Zelda*, etc. If the main character weren't a chick, you probably wouldn't even care about these games. All I am saying is that if you really need to put a girl on the cover, put someone more deserving: Cammy, Claire Redfield, Sarah Bryant, Areis, Tifa, someone from *Final Fantasy VIII*, or any Square game! Please put a stop to Lara! She looks like a monkey, anyway.

Corby De Meis
ccd7@hotmail.com

We were as surprised — and gratified — as anyone to discover that *TR III* was actually a much better game than we thought it would be. Even though Ms. Croft may have become a bit overexposed in the last couple of years, she remains an enduring pop culture icon, an emissary to the world at large that computer and video games aren't just for kids anymore. For this reason, as long as the games continue to live up to the hype, we will continue to support her.

Plus, she sells a lot of issues, y'know?

Most CG (the cover of **NG 50** for example) has a very distinctive look, but computer-generated movie special effects are obviously photorealistic. Is this done deliberately, or does the latter just require much more time and effort?

Philip Loden
wquay@hotmail.com

A little of both actually. In the case of images like *FF VIII*'s Squall, it's mostly a matter of Square's heavy anime influence, and the stylization and deliberate unreality it brings. Still, human beings are notorious for being the most difficult objects to model in 3D — even in the most megabudgeted movies, while scaly dinosaurs can be made to look real enough, you'll notice the odd CG person is shown briefly, or from far away.

Did you guys intentionally rip off and disgrace *EGM*'s top 100 list or was it subconscious? Also, you spoiled parts of several games' storylines for those who hadn't beaten them. *Metal Gear Solid* and *Final Fantasy VII* specifically (I've been through these games but not everyone has). You could have put a warning above your "memorable moments" (very similar to *EGM*'s) that below there was something that may spoil your enjoyment of a game.

I have loved your magazine to this point, but I thought the Top 50 was horrible.

IceBladeX
icolver@gte.net

From what point have you loved **Next Generation**? We did the original Top 100 back in **NG 21** in September of 1996 — well before *EGM* did their list in November 1997. Do the math and draw your own conclusions. We're sorry we spoiled the games — we just assume, for some reason, that our readers have played most, if not all, of these games. Oh, that's right — it's because we're a hardcore gamer's magazine. But then, you knew that, right? Chill out, Ice.

Can you guys please take the idiot that wrote the article on *Dark Stone* in **NG 50** out and shoot him, please? Everyone knows that *Diablo* was by Blizzard, the gods of PC gaming, and not by those losers-that-can't-make-a-fun-game-if-their-immortal-souls-depended-on-it at Westwood. Please correct the error and kill the one responsible to show that this type of slander will *not* be tolerated by **Next Generation**.

Timothy Danger
liamtoh13@hotmail.com

Thanks for the correction. While we were able to find some bullets, no one at **Next Generation** actually owns a gun, so rather than shoot the editor in question we drove in the bullets in manually with a ball-peen hammer. We hope this was acceptable.

I hate to be one of those bastard nitpickers but in your 50 Best Games article you placed a picture of *Star Control III* in the write up of *Star Control II*. I wouldn't even care that much, but the third game was terrible. The only good part of the third game was when the ancient race the player was looking for turned out to be a bunch of cows.

Seth Thompson
seth@pizza-time.com



Classic game sites like this are being shut down by the IDSA

The editor has been dealt with. See above. Same guy.

I am a senior software engineer in a Fortune 500 company, and aside from "serious" programming I love to play videogames. I've never written to a magazine before because I've never felt strongly enough about a subject, however the recent crackdown by the IDSA against some retrogaming sites, such as Dave's Videogame Classics, has really disturbed me.

I'm not going to argue about copyrights and intellectual property laws, because no matter what argument is made, the IDSA will always recite the same tired old litany: The law is the law, and it is illegal to download, possess, or use copyrighted game programs (i.e. ROM images) without the permission of the copyright holder. Fine, they're absolutely right, no argument here.

The retrogaming fans argue that these classic games are no longer for sale or can no longer be found in arcades, and therefore the copyright holders are not losing anything by their casual use. For the most part this is a valid point. The IDSA counters this by saying that just because a game is not currently for sale, it doesn't mean it will never be for sale, and they also love to point out how the gaming industry lost $3.2 billion last year due to software piracy. I have a real problem with this estimate because it lumps together mass counterfeiting of software by professional piracy operations with little Johnny who downloads a *Space Invaders* ROM from the Internet and forgets about it 20 minutes later.

Come on guys, give me a break! This argument is really getting tired. The industry is booming, game companies are more profitable than ever, and yet they seem unwilling to give a little bit back to the consumers who have supported them over the years — consumers without whom these companies could not exist. Since the IDSA is the direct voice of its constituent companies, it seems to me like a slap in the face for the industry to takes such a stand.



All right, so we couldn't find a screen shot of *Star Control II* — how about this real purty box art?

As a 30-year old male, I belong to one of the most important demographic groups for the videogame industry. People in the 18–34 age group have the money and aren't afraid to spend it for quality entertainment products. This, I believe, is also the demographic which is most interested in reviving some of the classic games that we grew up with. I buy between 20–30 PC games and between 40–50 console games a year. Over the years, I've spent literally thousands of dollars on videogames, and damn it, I want the companies I've loyally supported to lighten up! Honestly, how much of that $3.2 billion was lost *Pac-Man* revenue?

As a final point, the IDSA suggests that we (the gamers) write to the game publishers and ask that they release these games to the public domain. This is not a bad idea in theory, but I doubt a letter-writing campaign would accomplish much. I suggest a different approach. We must remember that as consumers we have the ultimate power to steer the industry: The power to buy, or not to buy the products that these companies produce. I know this may be difficult for some people, but instead of begging the companies to allow free distribution of these classic games, demand it by not supporting them unless they do. Let them know how you feel, and that the IDSA and its actions are the reasons for the loss of your patronage. Then the lost profits will be real, not caused by piracy and not "perceived" or "estimated" losses.

I think you'd be surprised at how quickly game publishers would change their attitudes. I think they'd prefer to have you buy their latest games than to lose your business by disallowing the free distribution of a 20-year-old game that doesn't net them a dime.

Steve Ferraro
Sferraro@bn.com

Well said. Anyone else care to add anything? NG

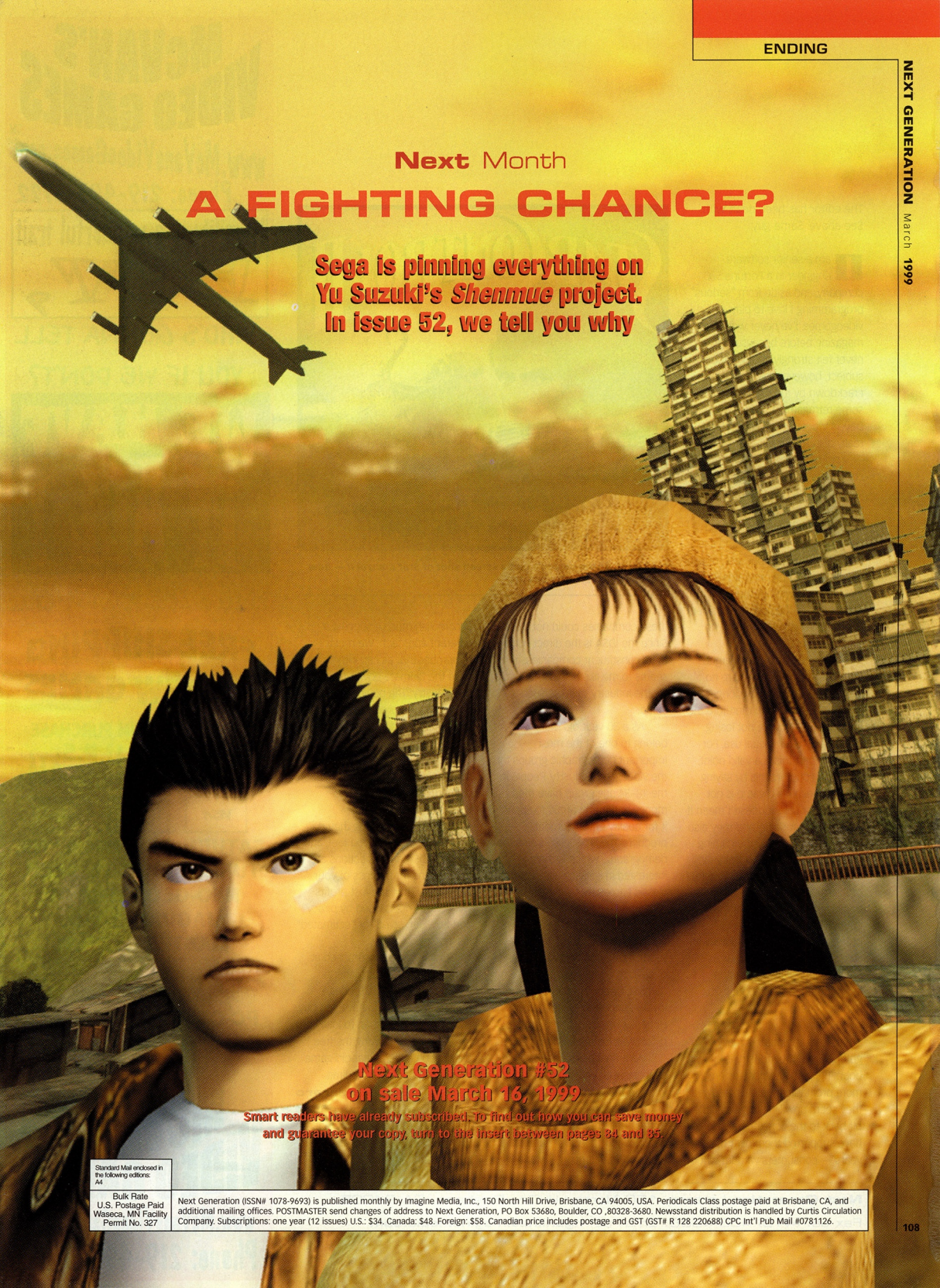
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Next Month

A FIGHTING CHANCE?

Sega is pinning everything on Yu Suzuki's *Shenmue* project. In issue 52, we tell you why



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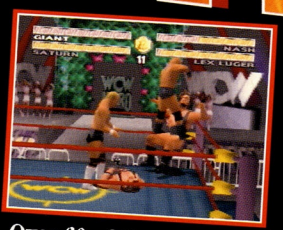
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